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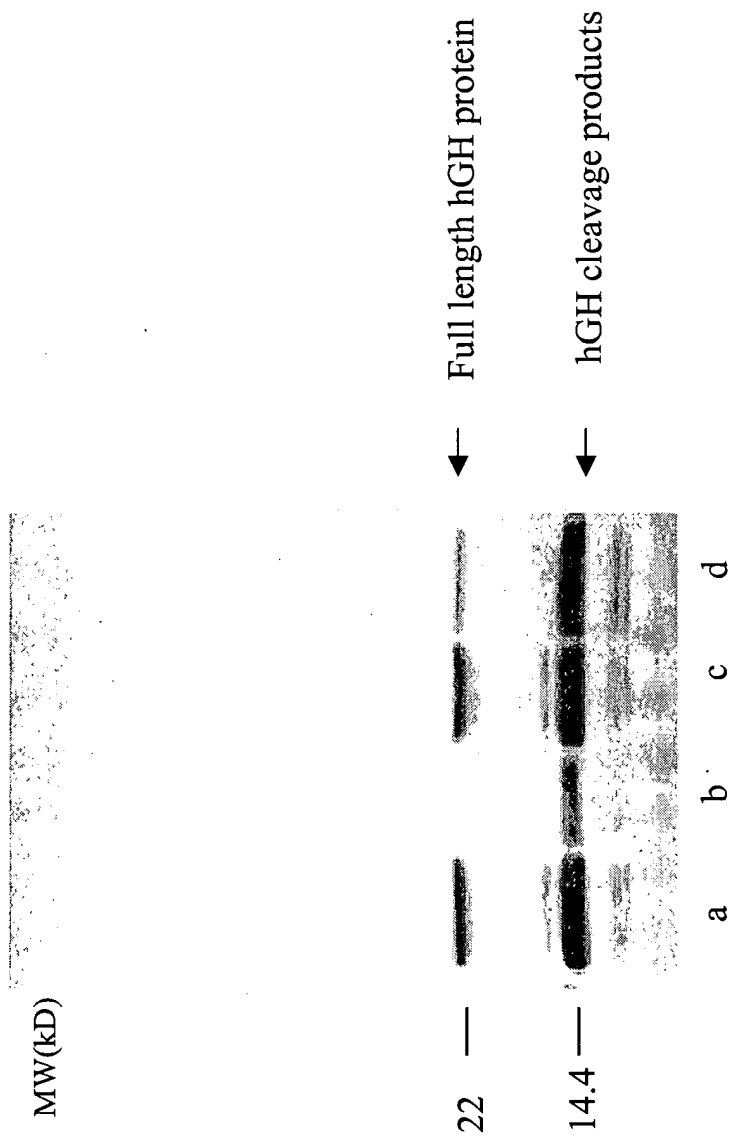
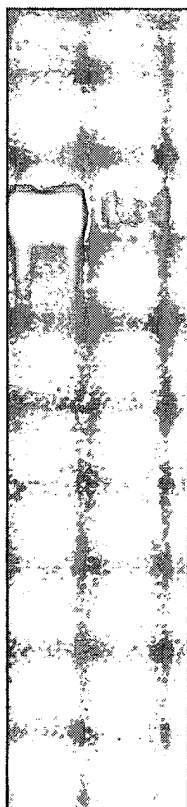


FIGURE 1



- PMSF, 5ul
+PMSF, 5ul

FIGURE 2

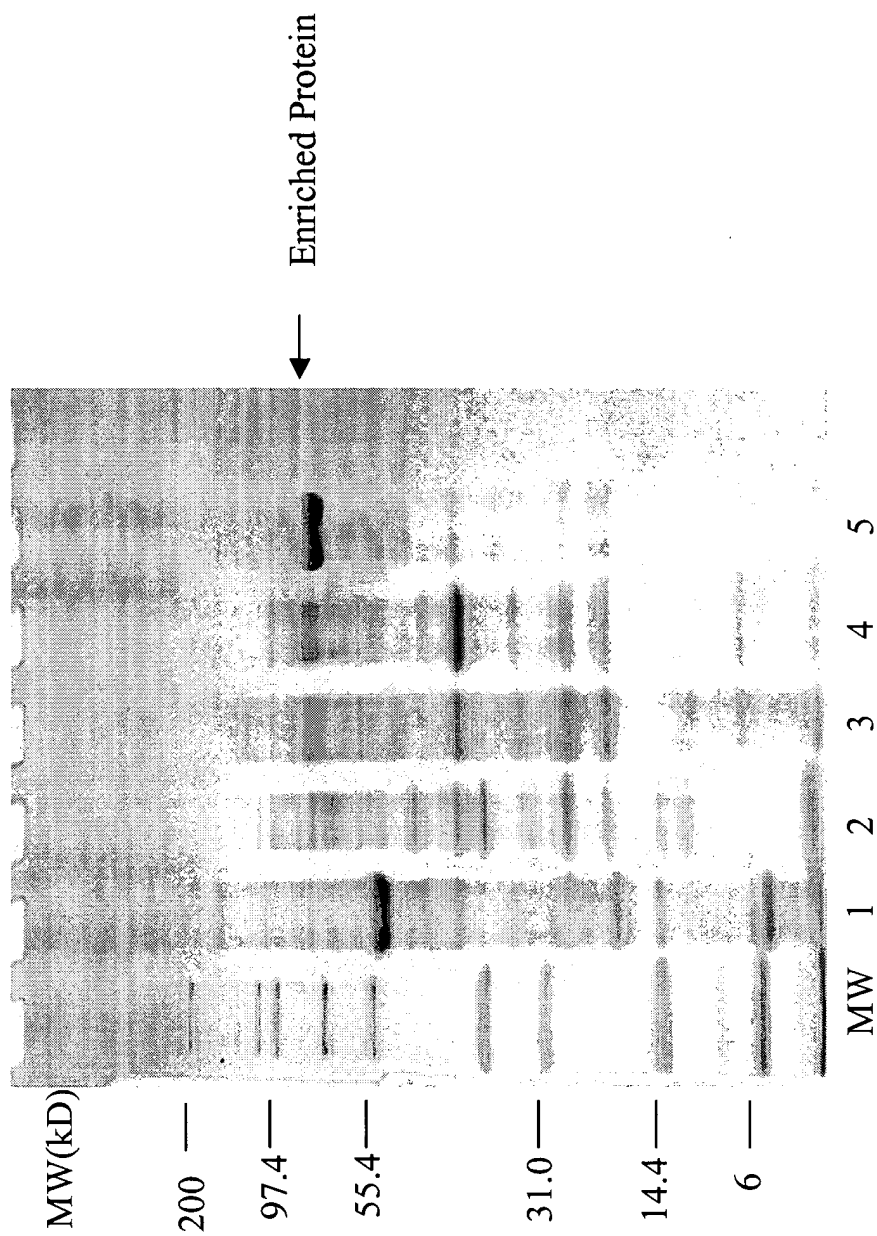


FIGURE 3



Nicotianalisin

SEQID NO:30

TTHTSQFLGL

Tomato

P69A

TTHTSSFLGL

P69B

TTHTPSFLGL

P69C

TTHTPSFLGL

P69D

TTHTPSFLGL

SBT1

TTRSPTFLGL

SBT2

TTRSPLFLGL

SBT3

TTHTSDFLKL

SBT4B

TTHTSDFLKL

SBT4

TTYTEGYLKL

Arabidopsis

Air3

TTRSWDFLGL

Ara12

TTRTPLFLGL

Consensus

TT

FL L

FIGURE 4

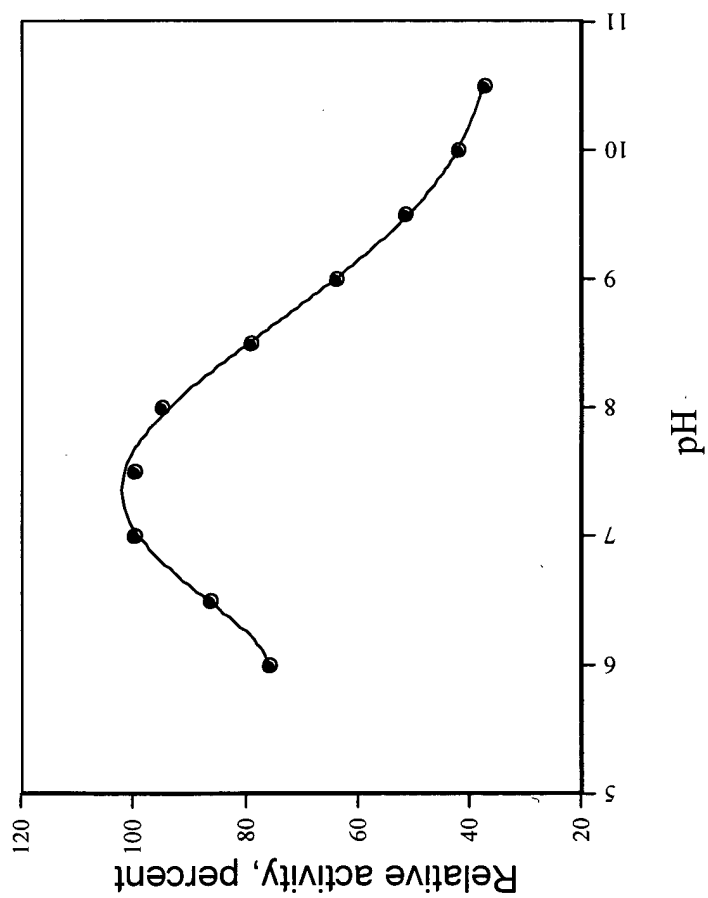


FIGURE 5

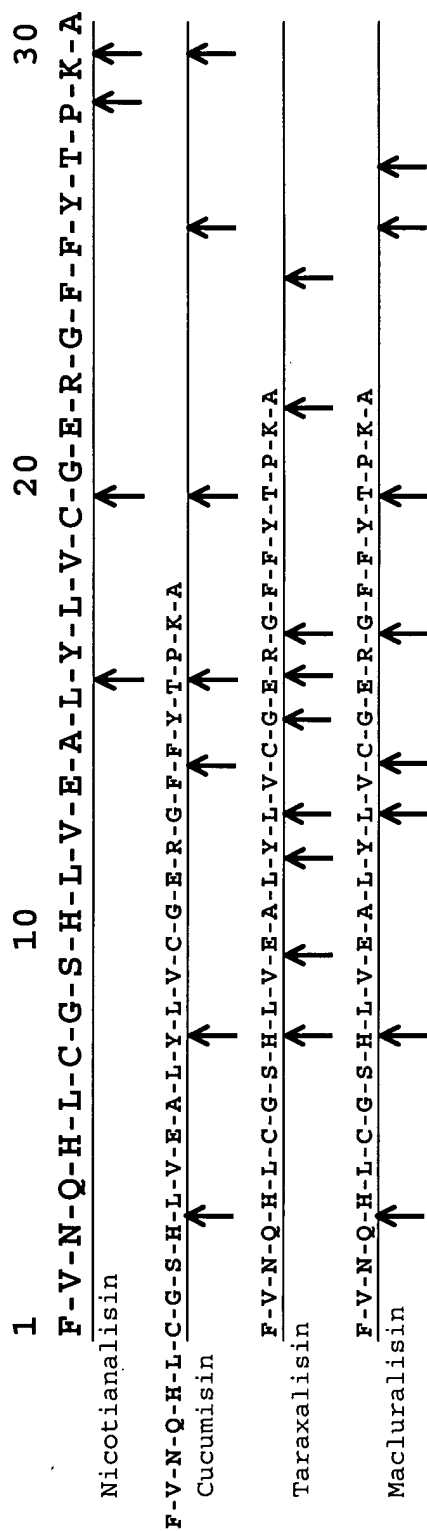


FIGURE 6

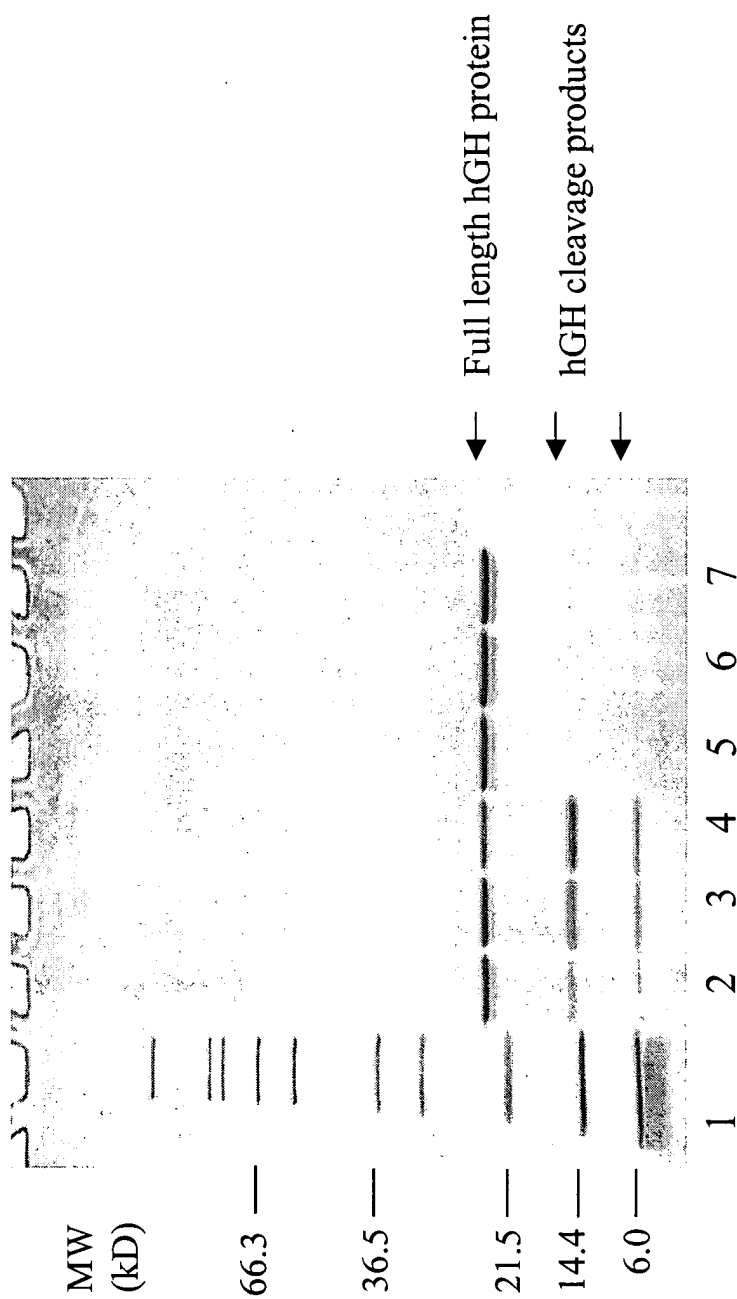


FIGURE 7

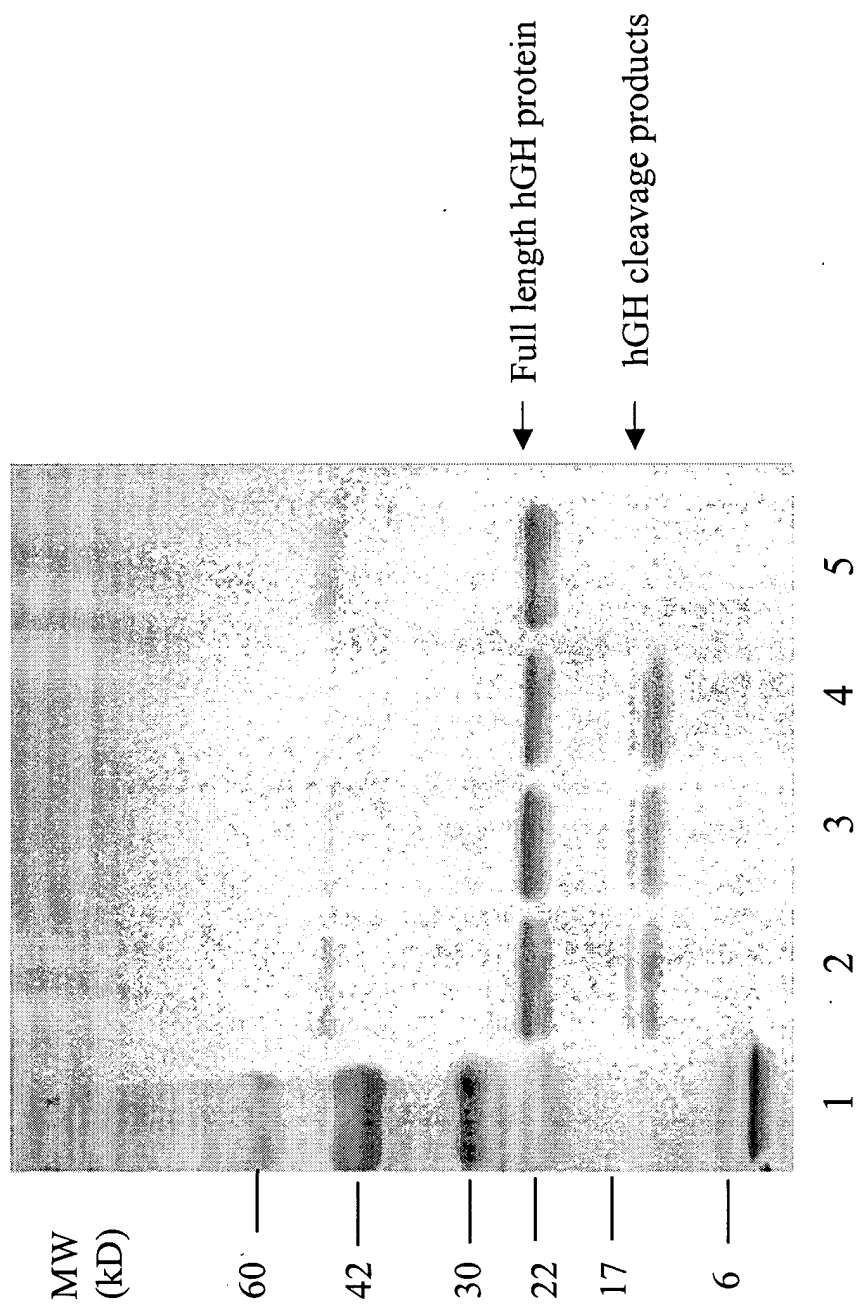
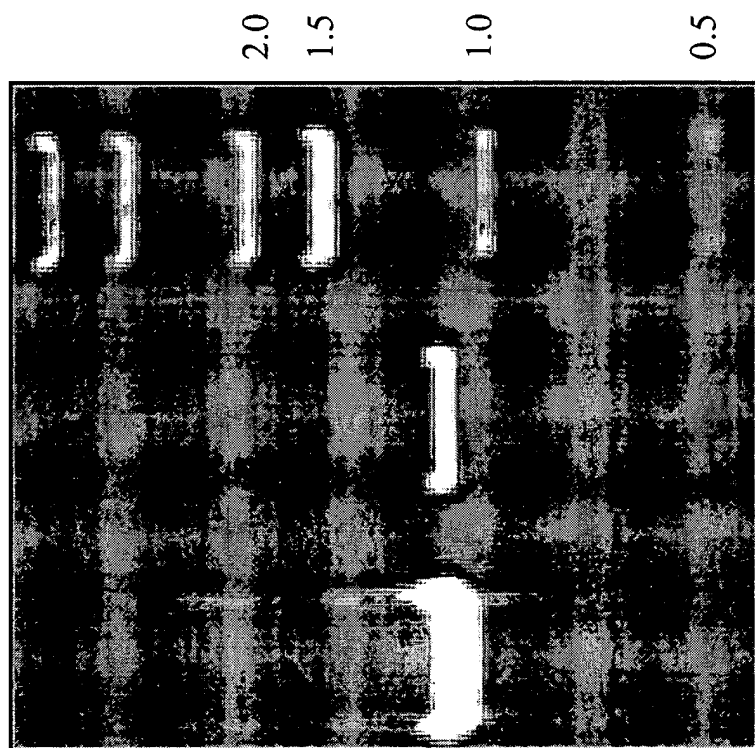


FIGURE 8



Nb At MW markers (kb)

FIGURE 9



Figure 10

*			
Seq ID 24	GVIIGVIDTGI FD PHPSFSDVGMSPPPAKWKGFCESNFTTKCNNKIIGLR	50	
Seq ID 25	GVIIGVIDTGIvPDHPSFSDVGMppppAKWKGFCESNFTTKrNNKLIIGaR	50	
p69A (tomato)	GVIIGVIDTGI LP DHPSFSDVGMppppAKWKGVCESNFTnKCNNKIIGaR	50	
Consensus	gviigvidtgi pdhpsfsdvgm pppakwkg cesnft k nnk ig r		
*			
Seq ID 24	SFRLSEDTPIDTDG HG HTHTASTAAGAFVKGANFFGNANGTAVGVAPLAHM	100	
Seq ID 25	SFPldng.PIDen HG HTHTASTAAGAFVKGANvFGNANGTAVGVAPLAHi	99	
p69A (tomato)	SyqLghgsPIDddG HG HTHTASTAAGAFVnGANvFGNANGTAAGVAPfAHi	100	
Consensus	s l pid ghgthtastaagafv gan fgnangta gvap ah		
*			
Seq ID 24	AIYKVC.SFATCSETDALAAMDAAIDDGVDIISASLGGFTNAPLHDDPIS	149	
Seq ID 25	AIYKVCgSdgvCSdveiLpAMDvAIDDGVDILSiSLGGtsN.PfHnDkIa	148	
p69A (tomato)	AvYKVCnSd.gCadTDvLAAMDAAIDDGVDILSiSLGGggssdfysnPia	149	
Consensus	a ykvc s c l amd aiddgvdi s slgg i		
*			
Seq ID 24	LGAYSATEKGILASASAGNSE.FDNPVANNAPWILTVGASTHDRKLKATV	198	
Seq ID 25	LGAYSATERGILvScSAGNSgpfQrtVnNdAPWILTVGASTHDRKLKATV	198	
p69A (tomato)	LGAYSATERGILvScSAGNngpstgsVgNeAPWILTVGASTqDRKLKATV	199	
Consensus	lgaysate gil s sagn v n apwiltvgast drklkatv		
*			
Seq ID 24	KLGNKEEFEGESADQPKTSNSTFIALFDAGKNASD...QDAPFCRSWAM	244	
Seq ID 25	KLGNKEEFEGESAyhPKTSsSTffLFDveK...DgtratrAPFCipgsl	245	
p69A (tomato)	KLGNrEEFEGESAy rPK iSNSTffALFDAGKNASD...efetPyCRSgsl	246	
Consensus	klgn eefegesa pk s stf lfd k d p c		
*			
Seq ID 24	TDPAIKGKIVLCQKDPSSLTSSQGRNVKDAGGVGMILINNPEDGVTKSAT	294	
Seq ID 25	TDPsIrGKIVvClvgggvrTvdkGqvVKDAGGVGMILINNPEDGVTKSAe	295	
p69A (tomato)	TDPvIrGKIViClagggvprvdkGgaVKDAGGVGMiINqqrsgVTKSAd	296	
Consensus	tdp i gkiv c g vkdagvgmi in gvtksa		
*			
Seq ID 24	AHVLPALDVSHEEGEKIKAYIN ST SNPIAAITFQGTVIGDKNAPIVASFS	344	
Seq ID 25	AHVLPALDVsdadGkKILAYIN ST SNPvAAITFhGTvIGDKNAPIVASFS	345	
p69A (tomato)	AHVipALDiSdadGtKILAYm ST SNPvAtITFQGTiIGDKNAPIVAaFS	346	
Consensus	ahv pald s g ki ay nst snp a itf gt gdknapiva fs		
*			
Seq ID 24	ARGPSRANPGILKPDIIIGPGVNILAAWPTTVNIPNKNTNSGFNIISGTSM	394	
Seq ID 25	sRGPS e AsrGILKPDIIIGPGVNvLAAWPTsVdn.NKNTkStFNIISGTSM	394	
p69A (tomato)	sRGPSgAsiGILKPDIIIGPGVNILAAWPTsVdd.NKNTkStFNIISGTSM	395	
Consensus	rgps a gilkpdiigpgvn laawpt v nknt s fniisgtsm		
*			
Seq ID 24	SCPH	398	
Seq ID 25	SCPH	395	
p69A (tomato)	SCPH	399	
Consensus	scph		

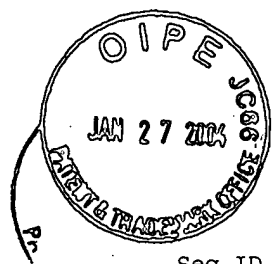


Figure 11A

Seq_ID_40	.....	0
Seq_ID_39	.....	0
Seq_ID_25	.....	0
P69D	.....mgflkillififcsflrpsiqsdletyivhvespenqistqssltldlesyy	51
P69A	.....mgflkillvfifcsfpwptiqsnletyivhvespeslistqssltldldsy	51
P69C	.....mgffkilfvfifcsfpwptiqsdletyivhvespeslittqssltldldsy	51
P69B	.....mgllkillvfifcsfqwptiqsnletyivhvespeslvttslltdlgsyy	51
Seq_ID_24	.....	0
CUSSP	.....mssslifklffflffsnrlasrldsdddgkniyivymgrkledpd	46
Seq_ID_19	.....	0
Seq_ID_18	.....ancitmyfllltillltlnpltmaesetyiihmdlsampkafsshqnwylttl	53
Seq_ID_20	.....	0
SBT4	.....msgsrniwfpyspylvlfswalsahlylaiaqrstyivhldkslmpnvftdhhhwhssti	59
SBT3	.....mell.hlllfswalsahlflalagrstyivhldkslmpnvftdhhhwhssti	51
AG12	.....mklyngiclpylflfasciclahasstsmekstyivhmdkshmpkaftshhnwyssiv	59
AIR3	.....mklnhnsflllllllvhmsskhilaskdsssyvvyfgahshvgeitedamdr	52
Seq_ID_21	.....vfpfffiisfcltpvtisvqsdghetfiihvksdkprvftthhhwyssii	52
Seq_ID_22	.....ptrpvfvpfffiisfcltpvtisvqsdghetfiihvksdkprvftthhhwyssii	56
Seq_ID_23	.....lssssssfslliffllnslvisvqldghktfivhvskshkphifttrqhwyssil	55
MDC16.21	maklsissiffvfp1llcfff.sp.sss.ssdglesyivhvqrshkpslffssnnwhvsll	57
Seq_ID_27	marpgg.mvlstflml.f...hvfvhagqnqkktiyiymdksnipadfdhdhtlwydssl	55
SBT1	merlrl.mfllilmvvl.f...hvfvdarqnqkktiyiymdkfnpadfdhdhtqwydssl	55
ARA12	msssfllsstafflllclgfc.hvs.ssssdqg.tyivhmaksqmpssfdlhnwydssl	56
Seq_ID_26	.....h.....	1
SBT2	.....magmllkcmfffvsvclainlakcsptkktiyiiqmdkwakpdvfvdhvqwysslv	56
Seq_ID_28	.....	0
F22M8.3	.....mffrsfivfffliffasnvsrkqtyvihtvtsttkhi	38
Seq_ID_29	.....	0
Consensus	t i h s	60
Seq_ID_40	.....G.	1
Seq_ID_39	.....G.	1
Seq_ID_25	.....G.	1
P69D	lsflpktttaisssgdeeaas.miysyhnvmkgfaarltaaqvkemekkhgfvsaqkqri	110
P69A	lsflpktttaisssgneeaat.miysyhnvmtgfaarltaeqvkemekingfvsaqkqrt	110
P69C	lsflpkttttisssgneeaat.miysyhnvmtgfaarltaeqvkemekkhgfvsaqkqri	110
P69B	lsflpktattisssgneeaat.miysyhnvmtgfaarltaeqvkemekkhgfvsaqkqri	110
Seq_ID_24	.....	0
CUSSP	sahlhhramleqvvgstfapesvlhtykrsfngfavklteeeaeiasmegvsvflnem	106
Seq_ID_19	.....	0
Seq_ID_18	asvsgssslgtesnrnsfsssklvaytnaihgfSATLSPSELGViknspgylsstkdmT	113
Seq_ID_20	.....tprptrxptrpplrplspseykaiknslgyvssmedrt	38
SBT4	dsikasvps...svdrfhsapklvysydhvfhgfsavlskdelaalkkspgffisaykdrT	116
SBT3	dsikasvps...svdrfhsapklvysydnvlhgfsavlskdelaalkklpgffisaykdrT	108
AG12	dclnsekp.....ttssfytytnhvlhgfsaslsHQELDTLRESPGFVSAYDRN	109
AIR3	vkethydfllgsftgsreratdaifysytkhingfaahldhdlayeiskhpevvsvfpnka	112
Seq_ID_21	rsvs.....qhpskilytyeraavgfsarltaaqadqlrripgvisvlpdev	99
Seq_ID_22	rsvs.....qhpskilytyeraavgfsarltaaqadqlrripgvisvlpdev	103
Seq_ID_23	rsvssss.....qhsakilysydyaargfsarltsqqadrlrrmpgvsvvpdra	105
MDC16.21	rsllpssp.....q.patllsysravhgfsarlspiqtaalrrhpsvisvipdqa	106
Seq_ID_27	kvs.....kganmlytytnvnhgystqltadeaksleqqpgilsvheevr	101
SBT1	kvs.....ksanmlytytnsvihgystqltadeakalaqqpgillvheevi	101
ARA12	rsis.....dsaellytyenaihgfstrltqeadslmtqpgvisvlpehr	102
Seq_ID_26	.....	1
SBT2	ksvlpstte...vektgdgeerilysyqtafhgvaaqlseeevkklqerngvlavfpeik	113
Seq_ID_28	.....	0
F22M8.3	vtslfnsllqtenindddfslpeihiyenamsgfsatltdldqldtvkntkgfisaypdel	98
Seq_ID_29	.....	0
Consensus	s y y g f a l g s	120



Figure 11B

Seq_ID_40	.....VIIGVIDTGIVPDHP.SFSDVGMPPP	26
Seq_ID_39	.....VIIGVIDTGIVPDHP.SFSDVGMPPP	26
Seq_ID_25	.....VIIGVIDTGIVPDHP.SFSDVGMPPP	26
P69D	fslhtthtspflglqnmgl.....wkdsnfgvgVIIGVlDTGIlPDHP.SFSDVGMPPP	164
P69A	lsldtthtssflglqnmgv.....wkdsnygkgVIIGVIDTGIlPDHP.SFSDVGMPPP	164
P69C	lshtthtspflglqnmgl.....wkdsnygkgVIIGVIDTGIVPDHP.SlSDVGMPPsP	164
P69B	lshtthtspflglqnmgv.....wkdsnygkgVIIGVIDTGIiPDHP.SFSDVGMPPP	164
Seq_ID_24	.....gVIIGVIDTGIFPDHP.SFSDVGMsPP	26
CUSSP	nelhttrswdflglfpltvpr.....r..sqvesnivvGVlDTGIwPesP.SFdDeGfsPP	158
Seq_ID_19	.....v.....stqsaitagDdGisev	17
Seq_ID_18	vkidttthtsqflglnsdsga.....wpksdygkdVlVGlVDTGIwPesK.SynDnGMtev	167
Seq_ID_20	vkintthtshflglssmygs.....wpksnygkgVIIGVvDTGvwPeik.SFdDdGMsqv	92
SBT4	vepdttytfgyklnpssgl.....wpasglgqdmIIGVlDsGIwPesasfqdD.GiPei	170
SBT3	vephtthtsdflklnpssgl.....wpasglgqdvIvaVlDsGIwPesasfqdD.GMPei	162
AG12	atldtthtprflslnptgg1.....wpasnygedVIIGVIDSGvwPesdsfkdDgmtaqv	164
AIR3	lklhttrswdflglehnsyvpsssiwrkarfgedtIIanlDTGvwPesK.SFrDeGlgPi	171
Seq_ID_21	rhlhtthtptflgla..dsf...glwpnsdyaddVlVGVlDTGIwPerP.SFSDeGlstv	153
Seq_ID_22	rhlhtthtptflgla..dsf...glwpnsdyaddVlVGVlDTGIwPerP.SFSDeGlstv	157
Seq_ID_23	rqlhtthtptflgla..dsf...glwpnsdyaddVlVGVlDTGIwPerP.SFSDgGlsav	159
MDC16.21	reihthtthtpaflgfs..qns...glwsnsnygedVlVGVlDTGIwPeHP.SFSDsGlgPi	160
Seq_ID_27	yelhttrspftflglegresr...sfflqaetarseVIIGVlDTGvwPesK.SFdDtGlgPv	157
SBT1	yelhttrspftflglegresr...sffpqtetarseVIIGVlDTGvwPesK.SFdDtGlgqv	157
ARA12	yelhttrtpflflgld.ehta...dlfpeagsysdVvvGVlDTGvwPesK.SySDeGfgPi	157
Seq_ID_26	.....	1
SBT2	yqlhttrspflflglrdredss...klwadrlsdhnlVlVGVlDTGIwPesP.SFnDsGMTsv	169
Seq_ID_28	.....	0
F22M8.3	ls1httyshflglefgig....lwnetslssdVIIGlvDTGIsPeH.vSFrDthMtPv	152
Seq_ID_29	.....	0
Consensus	lhTt flgl w s viigv Dtgiwpe p sf d g	180
Seq_ID_40	PAKWKGFCES...NFTTKCNKLIgARsFPLDNG.....PIDENGHGTH	67
Seq_ID_39	PAKWKGFCES...NFTTKCNKLIgARsFPLDNG.....PIDENGHGTH	67
Seq_ID_25	PAKWKGFCES...NFTTKrNNKLIgARsFPLDNG.....PIDENGHGTH	67
P69D	PAKWKGvCES...NFTTKCNKLIgARsYqLNgS.....PIDdNGHGTH	206
P69A	PAKWKGvCES...NFTnKCNNKLIgARsYqLghGs.....PIDddGHGTH	206
P69C	PAKWKGvCES...NFTnKCNNKLIgARsYqLaNgS.....PIDddGHGTH	206
P69B	PAKWKGvCES...NFTnKCNNKLIgARsYqLNgS.....PIDsiGHGTH	206
Seq_ID_24	PAKWKGFCES...NFTTKCNKliIGlRSFrLsedt.....PIDtdGHGTH	68
CUSSP	PpKWKGtCet...snnfrCNrKiIGARsYhigrpispG.....dvngPrDtNGHGTH	207
Seq_ID_19	PsrWKGeCESgtefnsslCNkKLIGARyFnkgllannpn...lnismnssrDtdGHGTH	73
Seq_ID_18	PsrWKGeCESgtqfnsslCNkKLIGARyFnkgliannpn...itismnsarDtdGHGTH	223
Seq_ID_20	PsrWKGiCqtgtqfnsslCNkKLIGARyFnkgllskvkn...ltiminsarDteGHGTH	148
SBT4	PkrWKGiCnpgtqfnTsmCNrKLIGAnyFnkgllaedpn...lnismnsarDtnGHGTH	226
SBT3	PkrWKGiCkpgtqfnasmCNrKLIGAnyFnkgilandpt...vnitmnsarDtdGHGTH	218
AG12	PArWKGiCsr.egfnssmCNsKLIGARyFnngimaaipn...atfsmnsarDtlGHGTH	219
AIR3	PsrWKGiCqn.qkdaTfhCNrKLIGARyFnkgyaavgh...lnssfdPrDldGHGsH	226
Seq_ID_21	PssWKGkCvtgpdfpeTsCNkKiIGAqmFykgyeakh.g.pmdeskesksPrDteGHGTx	211
Seq_ID_22	PssWKGkCvtgpdfpeTsCNkKiIGAqmFykgyeakh.g.pmdeskesksPrDteGHGTH	215
Seq_ID_23	PsgWKGkCETgldfpaTsCNrKiIGARlFykgyeadr.gspideskesksPrDteGHGTH	218
MDC16.21	PstWKGCEigpdfpassCNrKLIGARaFyrgyltqrngtkkhaakesrsPrDteGHGTH	220
Seq_ID_27	PmsWKGCEqigknfkassCNrKLIGARfFsqqyeaafga..idettesksPrDddGHGTH	215
SBT1	PAsWKGkCqtgknfdassCNrKLIGARfFsqqyeaafga..idetiesksPrDdeGHGTH	215
ARA12	PssWKGCEagtnftaslCNrKLIGARfFargyestmgp..ideskesrsPrDddGHGTH	215
Seq_ID_26	.....	1
SBT2	PshWKGvCetgrgfehhCskKivGARvFfrygeaasgk..inergefksarDqdGHGTH	227
Seq_ID_28	.....	0
F22M8.3	PsrWrGsCdegtnfssseCNkKiIGAsaFykgyesivgkin..ettdfrstrDaqGHGTH	210
Seq_ID_29	.....	0
Consensus	p wkg ce g f cn kligar f g sprd gHgth	240



Figure 11C

Seq_ID_40	TASTAAGAFVKGANVFGNANGTAVGVAPLAYIAIYKVCSDGV...CSDVEILAAMDVAI	124
Seq_ID_39	TASTAAGAFVKGANVFGNANGTAVGVAPLAYIAIYKVCSDGV...CSDVEILAAMDVAI	124
Seq_ID_25	TASTAAGAFVKGANVFGNANGTAVGVAPLAHIAIYKVCSDGV...CSDVEILpAMDVAI	124
P69D	TAGTAAGAFVKGVNiFGNANGTAVGVAPLAHIAvYKVCsSDGg...CSDsdILAAMDaAI	263
P69A	TASTAAGAFVnGANVFGNANGTAaGVAPfAhIAvYKVCnSDG...CaDtdvLAAMDaAI	262
P69C	TASTAAGAFVnGANVFGNANGTAVGVAPLAHIAIYKVCsSDG...CSDsdILAAMDaAI	262
P69B	TASTAAGAFVKGANVvGNAdGTAVGVAPLAHIAIYKVCnSvG...CSesdvLAAMDsAI	262
Seq_ID_24	TASTAAGAFVKGANfFGNANGTAVGVAPLAHIAIYKVCsfat...CSetdaLAAMDaAI	124
CUSSP	TASTAAGglVsqaNlyGlgLGTArGvPLArIAaYKVCwnDG...CSDtdILAAYDdAI	263
Seq_ID_19	TsSTAAGsyVeGAsyFGyAtGTaIGiAPkAhvAmYKalwe.eg...vylsdvLAAIdQAI	129
Seq_ID_18	TsSTAAGshVesAsyFGyArGsAtGmAPkAhvAmYKalwe.eg...tmlsdILAIdQAI	279
Seq_ID_20	TsSTAAGslVKGAsyFGyApGfAiGVAPmAhvAvYKalwdgag...t.isdILAIdQAI	204
SBT4	sASiAAGnFaKGvshFGyAqGTArGVAPqArIAvYKfsfr.eg...sltsdliAAMDqAv	282
SBT3	cASitAGnFaKGvshFGyApGTArGVAPArIAvYKfsfn.eg...tftsdliAAMDqAv	274
AG12	TAtTAAGsVnGAsyFGyGkGTArGiAPrArvAvYKVtwp.eg...rytsdvLAgiDQAI	275
AIR3	TlSTAAGdFVpGvsiFGgNGTAKGgsPrArvAaYKVCwppvkneCyDadvLAAfDaAI	286
Seq_ID_21	TASTAAGslVanAsfyqyAkGeArGmAikArIAaYKiCwknG...CfnsdILAAMDqAv	267
Seq_ID_22	TASTAAGslVanAsfyqyAk...GmAikArIAaYKiCwknG...CfnsdILAAMDqAv	267
Seq_ID_23	TASTAAGsvVanAsfFqyAkGeArGmAvkArIAaYKiCwktG...CfDsdILAAMDqAv	274
MDC16.21	TASTAAGsvVanAslyqyArGTAtGmAskArIAaYKiCwtgG...CyDsdILAAMDqAv	276
Seq_ID_27	TAtTAAGsvVtGAslFGyAaGTArGmAshArvAaYKVCwagG...CfssdILAgMDqAv	271
SBT1	TAtTAAGsvVtGAslFGyAtGTArGmAshArvAaYKVCwtgG...CfssdILAgMDqAv	271
ARA12	TsSTAAGsvVeGAslFGyAsGTArGmAPrArvAvYKVCwlgG...CfssdILAIdKAI	271
Seq_ID_26	.....	1
SBT2	TAGTvAGsvVrGANlIGyAyGTArGmAPgArvAaYKVCwvgG...CfssdILsAvDqAv	283
Seq_ID_28	.....	0
F22M8.3	TASTAAGdiVpkANyFGqAkGlasGmrftsrIAaYKaCwalG...CastdviAAIdrAI	266
Seq_ID_29	.....	0
Consensus	tastaag v gas fgya gta g ap aria ykvcw g c sdilaamd ai	300
Seq_ID_40	DDGVDILSISLGG.TS.NPFHNDKIALGAYSATERGILVSCSAGNSGPFQRTVDNDAPWI	182
Seq_ID_39	DDGVDILSISLGG.TS.NPFHNDKIALGAYSATERGILVSCSAGNSGPFQRTVDNDAPWI	182
Seq_ID_25	DDGVDILSISLGG.TS.NPFHNDKIALGAYSATERGILVSCSAGNSGPFQRTVnNDAPWI	182
P69D	DDGVDILSISLGG.st.kPFHdDgIALGtYSATERGIfvSaSAGNSGPsLgtVaNeAPWI	321
P69A	DDGVDILSISLGG.ggssdFysnpIALGAYSATERGILVSCSAGNnGPstgsVgNeAPWI	321
P69C	DDGVDILSISLGG.sp.iPlyeDsIAmGAYSATERGILVSCSAGNdGhsmgsVDNsAPWI	320
P69B	DDGVDILSISLGG.gp.iPFHrDnIAIGAYSATERGILVSCSAGNSGPsfiTavNtAPWI	320
Seq_ID_24	DDGVDIiSaSLGG.ftnaPlHdDpIsLGAYSATEKGIlaSaSAGNS.eFdnpVaNnAPWI	182
CUSSP	adGVDIiSlSvGG.anprhyfvDaIAIGsfhAvERGILtSnSAGNgGPnffTtaslsPWL	322
Seq_ID_19	tDGVDvLSlSLG..idaiPlHeDpvAiaAfaAlEkGIfvStSAGNeGPpyeTlhNgtPWv	187
Seq_ID_18	eDGVDIiSlSLG..iddlalyeDpvAiatfaAmEkDIfvStSAGNeGPddqalhNgtPWv	337
Seq_ID_20	adGcDILSISfGa.vSpfPlyiDpIsiasfSAmEkGIfvSvSAGNeGPFdqslsNeAPWf	263
SBT4	adGVDmisiSfs..nrfiPlyeDaIsiasfGAmnkGvLVsaSAGNrGhswgTVNgspWI	340
SBT3	adGVDmisiSyG..yrfiPlyeDaIsiasfGAmnkGvLVsaSAGNrGPgigslNngspWI	332
AG12	adGVDviSISLG..ydgvpPlyeDpIAiasfaAmEkGvvVStSAGNaGPFfgnmhNgIPWv	333
AIR3	hDGaDviSvSLGG.ep.tsFfNDsvAiGsfhAakkrIvVvCSAGNSGPadstTVsNvAPWq	344
Seq_ID_21	DDGVhviSlSvGangyaphylyDsIAiGAfgAsEhGvLVSCSAGNSGPGayTavNiAPWm	327
Seq_ID_22	DDGVhviSlSvGangyaphylyDsIAiGAfgAsEhGvLVSCSAGNSGPGayTavNiAPWm	327
Seq_ID_23	adGVhviSlSvGadgyapeydaDsIAiGAfgAsEhGvvVSCSAGNSGPGasTavNvAPWI	334
MDC16.21	adGVhviSlSvGasgSapeyHtDsIAiGAfgATrhGIvVSCSAGNSGPNpeTatNiAPWI	336
Seq_ID_27	idGVnvLSlSLG..gtisdyyrDivAiGgfsAasqGIfVSCSAGNgGPsgsGslsNaAPWI	329
SBT1	idGVnvLSlSLG..gtisdyHrDivAiGAfsAasqGIfVSCSAGNgGPssgTlsNvAPWI	329
ARA12	aDnVnvLSmSLG..ggmsdyyrDgvAiGAfaAmERGILVSCSAGNaGPsssslsNvAPWI	329
Seq_ID_26	.....	1
SBT2	adGVnILSISLG..ggvssynrDslsiaAfgAmEkGvfVSCSAGNgGpdpislNvsPWI	341
Seq_ID_28	.....	0
F22M8.3	ldGVDviSlSLGG..SsrPFYvDpIAiagfgAmqknIfVSCSAGNSGptastVsnNgAPWl	324
Seq_ID_29	.....	0
Consensus	dgvd s slg d iaigaf a e gi vscsagn gp t n apwi	360



Figure 11D

Seq_ID_40	LTVGASTHDRKLKATVKLGNGKEEFEGE...SAYHPKTSNSTFFTLFDVEKIVHEQPVPAPF	239
Seq_ID_39	LTVGASTHDRKLKATVKLGNGKEEFEGE...SAYHPKTSNSTFFTLFDVEKIVHEQPVPAPF	239
Seq_ID_25	LTVGASTHDRKLKATVKLGNGKEEFEGE...SAYHPKTSNSTFFTLFDVEKdgratrAPF	239
P69D	LTVGASTHDRKLKvTVKLGNSKEEFEGE...SAYHPKTSNSTFFpLyDagKnesdQfsAPF	378
P69A	LTVGASTqDRKLKATVKLGNGKEEFEGE...SAYrPKiSNSTFFaLFDagKnasdefetPy	378
P69C	LTVGASTlDRKiKATVKLGNGKEEFqGE...SAYrPqiSNSTFFTLFDaaKnasdefktPy	377
P69B	LTVGASTlDRKiKATVKLGNGKEEFEGE...SAYrPKiSNaTFFTLFDaaKnakdpsetPy	377
Seq_ID_24	LTVGASTHDRKLKATVKLGNGKEEFEGE...SAdqPKTSNSTFiaLFDagKnasdQ.dAPF	238
CUSSP	LsVaASTmDRKfvvtqVqiGNqgsFqGv...SintfdnqyyplvsgrDipntgfdkstsrf	379
Seq_ID_19	LTVaAgTvDRefigTltLGNGvsvpGl...SLYpgnsSsSesslvvyve.cqddke....	238
Seq_ID_18	LTVaAgTvDRefigTlsLGNGvsvtGl...SLYpgnsSsSessivFlktcleeke....	389
Seq_ID_20	LsVaASTvDRdviriltLGNGvsvtGl...SLYpgns.tSdisvilvkncldkqe....	314
SBT4	LcVaAgftDRtfagTltLGNGlkiRgw...SlfparafvrdFpviynktlsdcssdalls	397
SBT3	LcVasghtDRtfagTltLGNGlkiRgw...Slfparafvrdspviynktlsdcseells	389
AG12	LTVaAgniDRsfagTltLGNDqtitGw...tmfpasaiessqlvynktisacnstells	390
AIR3	iTVGASTmDRefasnLvLGNGkhykGqslsStalPhakfypimasvnakaknasaldAql	404
Seq_ID_21	LTVGASTiDRefpAdViLGdnriFgGvslySg..npltdaklpvvysgdcg.....sky	379
Seq_ID_22	LTVGASTiDRefpAdViLGdnriFgGvslySg..npltdaklpvvysgdcg.....sky	379
Seq_ID_23	LTVaASTiDRefpAdViLGdgriFgGvslySg..dplgdSkplplysgdcg.....sql	386
MDC16.21	LTVGASTvDrefaAnaitGdgkvFtGtslyag..eslpdSqlslvygdcg.....srl	388
Seq_ID_27	tTVGAgTmDRefpAyisLGNGkkFsGvslySg..kalpsSvmplyvagnasqasn..gnl	385
SBT1	tTVGAgTmDRefpAyigiGNgkklNvGvslySg..kalpsSvmplyvagnvsqssn..gnl	385
ARA12	tTVGAgTlDRdfpAlaiLGNGknFtGvslfkg..ealpdkllpfliyagnasnatn..gnl	385
Seq_ID_26	.....	1
SBT2	tTVGASTmDRdfpATVeLGtgkiVtGaslykgrmnlstqkqypliylgsnssnlp.P.ssl	400
Seq_ID_28	.....	0
F22M8.3	mTVaASytDRtfpAiVriGNrkslvGsslykgk.....SlknlplafnrtagEesgAvF	378
Seq_ID_29	.....	0
Consensus	ltvgast dr f atv lngng f g s s	420
Seq_ID_40	CIPGSLTDP.....	248
Seq_ID_39	CIPGSLTDP.....	248
Seq_ID_25	CIPGSLTDPsirgkivvclvgggvrtvdkgqvvdagggvgmilinnpedgvtksaeahvl	299
P69D	CsPGSLnDpaikgkivlclrsislrrvaqqgsvkdagggvgmilineqkrvgtksaeahvl	438
P69A	CrsGSLTDPvirgkivviclagggvprvdkgqavkdagggvgmiiinqrsgvtksadahvl	438
P69C	CrPGSLTDPairgkivlclafggvtivdkgqavkdagggvgmiiinspddgvtkسادahlvl	437
P69B	CrrGSLTDPairgkivlcsalghvanvdkgqavkdagggvgmiiinspygvtkسادahlvl	437
Seq_ID_24	CrswamTDPaikgkivlclqkdpssltssqgrnvkdagggvgmilinnpedgvtkسadahvl	298
CUSSP	CtdkSvnpnllkgkivvceasfgpheffksldg..aagvlmtsn.....trdyadsypl	431
Seq_ID_19	lqknahkfivvcldknd....svgehvynvrnskvagavfitn...t.tdl.efylqsef	288
Seq_ID_18	leknahkfavcydtng....svsdqlynvknkvaggifitn...y.tdl.efylqsef	439
Seq_ID_20	lqnvtldkfivvcldkna....lvgkqvsvrhnasagavfitnd..fvtdlge.ylktef	366
SBT4	qfPdqpntiicidynkledgfgfdsqifhvtqarfkgagifise....dpavfrvasft.h	452
SBT3	qvenpentivicddn..gd.fs.d.qmriitrarlkaaifise....dpgvfrsatfp.n	439
AG12	davyS...vviceait....piyaqidaitrsnvagailisn...htklfelgggvsc	438
AIR3	CklGSLdpiktkgkilvclr.gqngrovekgravalggvgmilentyvtgndlladphvl	463
Seq_ID_21	CyPGKLdpkkvagkivlclr.ggnarvekgssavkqagggvgmilanladsgeelvadshll	438
Seq_ID_22	CyPGKLdpkkvagkivlclr.ggnarvekgssavkqagggvgmilanladsgeelvadshll	438
Seq_ID_23	CyPGmLdpkskvagkivlclr.ggnarvekgssavklaggagmvanladsgeelvadshll	445
MDC16.21	CyPGKLnsslvegkivlclr.ggnarvekgssavklaggagmilantaesgeeltadshlv	447
Seq_ID_27	CtsGSLipekvvgkivvclr.gmnaraqkgvlvkdaggigmilantdsygdelvadahl	444
SBT1	CtsGSLipekvvgkivvclr.gmnaraqkgvlvkdaggigmilantdygdelvadahl	444
ARA12	CmtGtLipekvvgkivmclr.ginarvqkgdvvkaagggvgmilantaangeelvadahl	444
Seq_ID_26	.....	1
SBT2	CldGtLdkasvagkivclr.gisprvqkgqvveagggvgmiltntaangeelvadshll	459
Seq_ID_28	.....driekgqavknagggvgmilinrlqdgstksadahvl	36
F22M8.3	CIrdSLkrelvegkivclr.gasgrtakgeevkrsggaamllvsteaageelladphvl	437
Seq_ID_29	.....	0
Consensus	c g l gkiv c g v kg vk agggvgmil n g ad h l	480

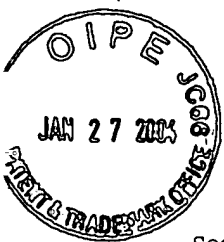


Figure 11E

Seq_ID_40	.....S.....	249
Seq_ID_39	.....S.....	249
Seq_ID_25	paldvsdadgkklayi.nstsnpvaaithgtvlgd.knapivasfssrgpseasrgil	357
P69D	paldvsnadgkklaym.nsssnvasitfhgtvlgd.knapivasfssrgpsvaspgil	496
P69A	paldisdadgkklaym.nstsnpvatitfqgtiigd.knapivaafssrgpsgasigil	496
P69C	paldvsdadgkklaym.nstsnpvatiafqgtiigd.knapmvaafssrgpsraspgil	495
P69B	palvvsaadgkklaym.nstsspvatiafqgtiigd.knapmvaafssrgpsraspgil	495
Seq_ID_24	paldvsheegekikayi.nstsnpiaaitfqgtvlgd.knapivasfsargpsranpgil	356
CUSSP	pssvldpndllatlyi.yisirspgatifiksttiln..asapvvvsfssrgpnratkdvi	488
Seq_ID_19	.....	288
Seq_ID_18	pavflnfedgdkvleyi.knshspkarlefqvthlga.kpapkvasyssrgpsescpfil	497
Seq_ID_20	psvflnfqngdqvlkyv.nstsspkakiglqgtligv.erapavahfssrgpsmtcpfil	424
SBT4	lgvvldkkekqvinvy.knsvsptatitfqetyvdrerpspfillgyssrgpsrsyagia	511
SBT3	pgvvvnkkekqvinvy.knsvtptatitfqetyldt.kpapvvaassargpsrsylgis	497
AG12	pclvispkdaalikya.ktdefplaglkfgetitgt.kpapavayssrgpspspgil	496
AIR3	patqltskdsfavryi.sqtkkpiahitpsrtdlg.lkpapvmassfsskgpsivapqil	521
Seq_ID_21	patmvqqkagdkirhyv.tsdpstativfrgtvigkspaaprvaafssrgpnhltpcil	497
Seq_ID_22	patmvqqkagdkirhyv.tsdpstativfrgtvigkspaaprvaafssrgpnhltpcil	497
Seq_ID_23	patmvqqkagdeirdyv.ksdsspkativfkgtvigkspasprvaafssrgpnhytpeil	504
MDC16_21	patmvgakagdqirdyiktsd.sptakisflgtligspspsprvaafssrgpnhltpvil	506
Seq_ID_27	ptgavgqtagxlirxi.asdsnpittiafggtklgvqp.spvvaafssrgpnpitpeil	502
SBT1	ptaavvgqtagnlikgyi.asnsnptatiafggtklgvqp.spvvaafssrgpnpitpdvl	502
ARA12	pattvgekagdiirhyv.ttdpnptasisilgtvvgvkp.spvvaafssrgpnstpnil	502
Seq_ID_26	.....	1
SBT2	pavavgeregrailkya..agrsatatlrflgtklgirp.spvvaafssrgpnflsleil	516
Seq_ID_28	paldvsffdgfqiteym.kstknparitfqgtiigd.knapvlagfssrgpstaspgil	94
F22M8_3	pavslgfsdgkttlnylag.aanatasvrfrgtayg..atapmvaafssrgpsvagpeia	494
Seq_ID_29	.....	0
Consensus	pa v g i y s p a i f g t g ap va fssrgps p il	540
Seq_ID_40	.....	249
Seq_ID_39	.....	249
Seq_ID_25	kpdiigpgvnlvaawptsvd....nnkntkstfniisgtsmscp.....	397
P69D	kpdiigpgvnlvaawptsvd....nnkntkstfnivsgtsmscphlsgvaallksahpd	551
P69A	kpdiigpgvnilaawptsvd....dnkntkstfniisgtsmscphlsgvrallksthpd	551
P69C	kpdiigpgvnilaawptsvd....dnkntkstfniisgtsmscphlsgvaallksthpd	550
P69B	kpdiigpganilaawptsvd....dnkntkstfniisgtsmscphlsgvaallksthpd	550
Seq_ID_24	kpdiigpgvnilaawpttvni....pnkntnsgfniisgtsmscph.....	398
CUSSP	kpdisgpgveilaawpsvapv....ggirrntlfniisgtsmscphitgiatyvktynpt	544
Seq_ID_19	.....	288
Seq_ID_18	kpdlmapgalilaswpqkspatqi.rsgelfsnfniisgtsmscphaagvaallkgahpk	556
Seq_ID_20	kpdlmapghlilaswplssvspy..t.elhnifniisgtsmscphaagvaalvkgthpe	481
SBT4	kpdlmapgalilaavppnipsvsi.enlqlttdyelksgtsmaaphaagiaamlkgahpd	570
SBT3	kpdlapgvnilaayppnvfatsignillstdyilesgtsmaaphaagiaamlkaahpe	557
AG12	kpdlmapgslvlaswipneataqigtnvylsshymvsgtsmacphasgvaallkaahpe	556
AIR3	kpdlitapgvsviaaytgavsptneqfdpr.1lfnaisgtsmscphisgiagllktryps	580
Seq_ID_21	kpdlviapgvnilagwtgsvgptdl.didtrrvefniisgtsmscphvgglaallrrahpk	556
Seq_ID_22	kpdlviapgvnilagwtgsvgptdl.didtrrvefniisgtsmscphvgglaallrrahpk	556
Seq_ID_23	kpdlviapgvnilagwtgsvgptdl.eidtrrvefniisgtsmscphvgglaallrkaypk	563
MDC16_21	kpdlviapgvnilagwtgsvgptdl.didprrvqfniisgtsmscphvgglaallrkahpd	565
Seq_ID_27	kpdlviapgvnilagwtgkvvgptgl.pedtrnvgnfniisgtsmscphvgglaallkaahpe	561
SBT1	kpdlviapgvnilagwtgkvvgptgl.qedtrnvgnfniisgtsmscphvgglaallkaahpe	561
ARA12	kpdlviapgvnilaawtgagptgl.asdsrrvefniisgtsmscphvgglaallksvhpe	561
Seq_ID_26	.....	1
SBT2	kpdlviapgvnilagwtgalgsssl.pidqrtrtnfniisgtsmscphvggiaallkarhpd	575
Seq_ID_28	kpdiigpgvnlvaawptsvenktn....tkstfniisgtsmscphlsgvaallksahpt	149
F22M8_3	kpdliaapgvnilagwspfsfp.sllrsdprrvqfniisgtsmacphisgiaaliksvhgd	553
Seq_ID_29	.....	0
Consensus	kpdl apgvnila w v fniisgtsmscph sg aallk hp	600



Seq_ID_40	.....	249
Seq_ID_39	.....	249
Seq_ID_25	.....	397
P69D	wspaaiksammттadtvnlnanspilde.r...lisadlfamgaghvnpsrasdpglvydt	607
P69A	wspaaiksammттadtlnlnanspilde.r...llpadiyaigaghvnpsrandpglvydt	607
P69C	wspaaiksaimттadtlnlnanspilde.r...llpadifatgaghvnpsrandpglvydi	606
P69B	wspaviksammттadtlnlnanspilde.r...llpadiyaigaghvnpsrandpglvydt	606
Seq_ID_24	.....	398
CUSSP	wspaaiksalmттaspmn.....a.r...fnpqaeafaygsgghvnplkavrpglvyda	592
Seq_ID_19	.....p.....	289
Seq_ID_18	wspaaairsammттadtmdnmqmpirdi.gr.nnnaasplamgagrlnpnkaldpgliydi	614
Seq_ID_20	wspaaairsammттadvldntqspiqli.grpenaataatplamgaghlnpnkaidpigliyd	540
SBT4	wspsaairsammттanhlnsaqdpite...dddmvaspplgigsgghvdpnraldpglvyda	626
SBT3	wspsaairsammттadpldntrkpikds...dnnkaatpldmgaghvdpnraldpglvyda	614
AG12	wspaaairsammттанpldntlnpihen.g.kkfhlaspamgaghidpnraldpglvyda	614
ATR3	wspaaairsaimттatimddipgpigna.tn...mkatpfsgfaghvqpnlavnpglvydl	636
Seq_ID_21	wtpaavksalmттaynldnsgkvftdl.a..tggestpfvghsgghvdpnraldpgliydi	613
Seq_ID_22	wtpaavksalmттaynldnsgkvftdl.a..tggestpfvghsgghvdpnraldpgliydi	613
Seq_ID_23	wttaaiksalmттaynldnsgkftfdi.a..tggesppfvghsgghvdpnraldpglvydi	620
MDC16.21	wspaaiksalmттaydvnsgepietl.a..tgksnspfhgaghvdpnkalnpplvydi	622
Seq_ID_27	wsxgvirsalmттgysthkngxmiedv.a..tgmsytpvdhgaghvnpaamnpglxydl	618
SBT1	wspaaairsalmттsystykngktiedv.a..tgmsstpfdygaghvnptaavspglvydl	618
ARA12	wspaaairsalmттayktykdgkplldi.a..tgkpstpfhdgaghvspttatnpigliyd	618
Seq_ID_26	.....asdgaghlnprkavdpglvydi	23
SBT2	wspaaiksalmттayvhdntykslkda.s...svtpstpydhgaghvnprkavdpgliydi	632
Seq_ID_28	wspaaiksaimттadtvnlnannpilde.mlr...panifaigaghvnpsrandpglvydt	205
F22M8.3	wspamiksaimттaritdnrrnpigdrgaagaesaatafafgagvndptravdpglvydt	613
Seq_ID_29	.....aitaghvnpesaidpigliydt	21
Consensus	wspaai sa mtta pi d gaghv p a dpglvyd	660
Seq_ID_40	.....	249
Seq_ID_39	.....	249
Seq_ID_25	.....	397
P69D	pfedyipylcglnyt...nrevgkvlqrkvncsevkripegqlnypsfsirlg.s....	658
P69A	pfedyvpylclnyt...nrqvgnllqrkvncsevkisileaqlnypsfsiylgls....	659
P69C	pfedyipylcglnyt...nrqvgnllqrrvncsevkiileaqlnypsfsicitelgs....	658
P69B	pfedyvpylclkyt...dqqvgnliqrrvncsevkisileaqlnypsfsifglgs....	658
Seq_ID_24	.....	398
CUSSP	nesdyvklfcgqgyn...tqavrritgdysactsgntgrvwdlnypsfglsvps....	644
Seq_ID_19	.....	289
Seq_ID_18	tsqdyinllcaldft...sqqikaitrssayscsnss...ldlnypsfigyfnyssesd	668
Seq_ID_20	tpqdyinllcalnlt...seqiktitrss.ytcnpns...ldlnypsfiayfnvnsseld	593
SBT4	tpqdyinlicslnft...eeqfktfarssanyhncsn.psadlnypsfiayfysyqegny	682
SBT3	tpqdyvnlclslnft...eeqfktiarssas.hncsn.psadlnypsfiayfysy...egn	667
AG12	tpqdyinllcsmnyn...kaqilaivrdsy...tcsndpsdlnypsfiayfn...tc	665
ATR3	gikdyinllcslgyn...asqisvfgsnftcsspk.islvnlnypsitvplnts....	687
Seq_ID_21	etsdyvnflcsigdygdvavfardssrvn.crserslatpgdlnypsfsfvftge....	667
Seq_ID_22	etsdyvnflcsmaygdvavfardssrvn.crserslatpgdlnypsfsfvftge....	667
Seq_ID_23	dtkdyvdlfcaigydpkrispfvkdtsvn.cseknlvspgdlnypsfsfvf.g.....	672
MDC16.21	evkeyvafllcavgyefpgilvflqdpitydacetsklrtagdlnypsfsfvf.a.....	675
Seq_ID_27	tvddyinlcaldy...spsmikviakrdisccxnkdiellithllpflwkrawgeha	675
SBT1	tvddyinlcaldy...spsmikviakrdisccdenkeyrvadlnypsfsipmetawgeha	675
ARA12	ttedylgflcalnyt...sp.qirsversrnytdcpsksysvadlnypsfsavndvgv.g..a	672
Seq_ID_26	gaqdyfelfctqqls...psqltvfgkfsnrthhslanpgdlnypaisavfpedakvs.	79
SBT2	gaqdyfelfctqels...psqlmvfgkfsnrthhslanpgdlnypaisavfpcktks.	688
Seq_ID_28	qfkdyisylcglkytdr...qmgslilqrtscksvksipeaqlnypsfsislgan....	257
F22M8.3	stvdylnylclslnytserillfsgtnytcasnavls...pgdlnypsfsavnlvng....	666
Seq_ID_29	dtstdynllcslnytekemklftnes...npcsgftgspldlnypsfsvmfrpd.....	72
Consensus	dy lc l y c dlnypsf	720



Figure 11G

Seq_ID_40	.....	249
Seq_ID_39	.....	249
Seq_ID_25	.....h.....	398
P69D	.....tpqtytrtvtnvgdakssykveiv.spkgvkvkvepsalnfstlnqklyqvift	712
P69A	.....tpqtytrtvtnvgdakssykveva.spealpskltr..anfssdqklyqvtf	711
P69C	.....rlfertli.....	666
P69B	.....tpqtytrtvtnvgdatssykveva.spegvaievepselnfsefnqklyqvtf	712
Seq_ID_24	.....	398
CUSSP	...qtfnqyfnrtltsvapqastyramis.apqgltisvnpn...vlsfnglgdrksftl	697
Seq_ID_19	.....	289
Seq_ID_18	...pkriqefqtrtvtnvgegmsvytaklt.smgdykasvapdklvfkekyekqsyklrie	724
Seq_ID_20	...ptrvqefkrtvtnvgegvseytaelt.ampglkvsvvpekvlvfkdkyekqsyklrie	649
SBT4	...pwleqkfrrtlttnvgkggatykvkie.spknstisvspqtlvfknknekqsytltir	738
SBT3	...tlleqkfkrtrtvtnvgkgaatykaklk.apknstisvspqtlvfknknekqsytltir	723
AG12	...rrsvntfqrtrtvtnvgdgaatykatvt.apkdsrvivspqtlafgskyekqsynltii	721
AIR3	.....skvtvsrtvknvgrp.smytkvkn.npqgvvyvavkptslnftkvgeqktfkvilv	740
Seq_ID_21	..sng.vvkykrvvnvgnvknndavyevkvnapssevnvvpaklvfseekqslsyelsk	724
Seq_ID_22	..sng.vvkykrvvnvgnvknndavyevkvnapssevnvvpaklvfseekqslsyelsk	724
Seq_ID_23	..sds.vvknkrvknvgnrntnavyevkinapgsvevkvtpklfsfseknkslsyelsfs	729
MDC16.21	..stgevvkykrvknvgnvknndavyevgvkspanveidvpsklafskeksvleyevtfk	733
Seq_ID_27	nssaptvtrytrtltnvgnpatykasvss.emqevkiqvepqtltfsrkkekktvtvft	734
SBT1	dsstptvtrytrtltnvgnpatykasvss.etqdvkilvepqtltfsrknekktvtvft	734
ARA12	.....y.kytrtvtsvggagtysvkvts.ettgvkisvepavlfnfkeanekksytvft	724
Seq_ID_26	.....tltlhrtvtnvgspisnyhvrsv.pfkgavvkvepsrlnftskhqklysykvife	132
SBT2	.....mltltlhrtvtnvgspisnyhvsv.afkgavvkveperlnftsknqklysykvtfk	741
Seq_ID_28	.....qqtytrtvtnvgeamssyrvkivs.pqnvsvvvkpstlklftklngklytrvtf	310
F22M8.3	..anlktvrykrtrtvtnvgsptceymvhve.epkgvkvrvpekvlfqkarerlsytvtyd	723
Seq_ID_29	..ssvhvvrkrtlthvavskpevykvkilnlneksvslsispmlmfneslrkqymvkf	130
Consensus	rtvtnvg y p v p l f k y	780
Seq_ID_40	.....	249
Seq_ID_39	.....	249
Seq_ID_25	.....	398
P69D	kttnis.....ttsdvegflkwnsnrhrsvrspiavrvsae.....	747
P69A	ktanss.....nteviegflkwtsnrhrsvrspiialliq.....	745
P69C	.....	666
P69B	kttnss.....npeviegflkwtsnrhrsvrspiavvsa.....	745
Seq_ID_24	.....	398
CUSSP	tvrgsi.....kgfvvsaslvwsdgvyhvrspititslv.....	731
Seq_ID_19	.....	289
Seq_ID_18	gpll.....diilfmvl.....	737
Seq_ID_20	cpqlmn.....dflvhgslswvekggkyvvrspivatns.....	683
SBT4	yrqdfn.....sgqtgsitwvekngrsvrspiavlthttvdlwgaed.....	779
SBT3	yigdegq.....srnvgsitwveqngnhrsvrspiivspiiev.....	761
AG12	nfrtdtk...rkdisfgalvwanengkhrsvrspiivvsplrind.....	761
AIR3	ksgkn.....vakgyvfgelvwskkhrsvrspiivvkl.....	772
Seq_ID_21	skks.gdlqmvkgiesafgsiiewsdgihnvrspiavrrhrhsdaasm.....	770
Seq_ID_22	skks.gdlqmvkgiesafgsiiewsdgihnvrspiavrrhrhsdaasm.....	770
Seq_ID_23	sngsvg.lervkglesafgsiiewsdgihsrvspiavhllhsatesq.....	775
MDC16.21	svvlggvgvsgvpgh..fgsiewtdgehvvkspvavqwgqgs.vqsf.....	777
Seq_ID_27	a.ss.....kpsgtts.farlewsdgqhvvvaspiafswt.....	766
SBT1	a.ts.....kpsgtts.farlewsdgqhvvvaspiafswt.....	766
ARA12	vdss.....kpsgsns.fgsiiewsdgkhvvgspvaiswt.....	757
Seq_ID_26	tkyr.....qkare..fgsllwkdgthkvrstivitwlas.....	166
SBT2	tvsvr.....qkape..fgsliwkdgthkvrspiavtvlav.....	775
Seq_ID_28	tttn.....itnmevvhgyklwtsdkhfvrspiavilgehetped.....	350
F22M8.3	aeasrn.....sssssfglvwicdkynvrspiavtwe.....	756
Seq_ID_29	shhifnss.rkiaeqmafgsiswesekhnvrspfavmvvqqnfnsrlykit	181
Consensus	g w g h vrsipa	840



TMV-SeqID 3 (-)

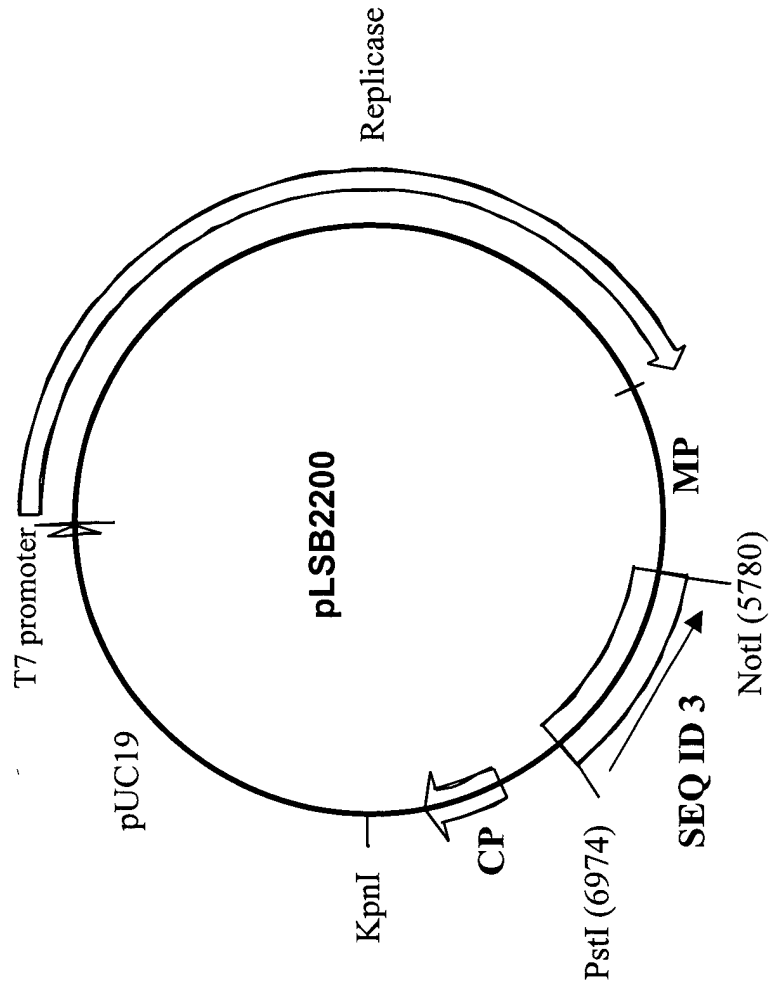


FIGURE 12A

TMV-SeqID 3 (+)

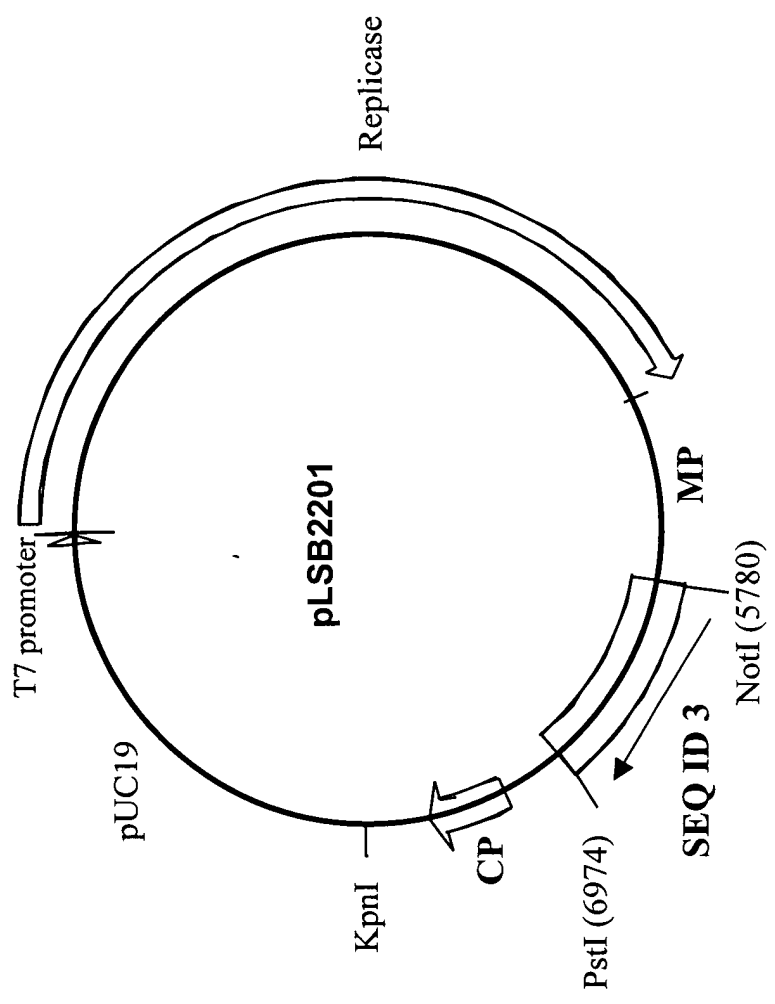


FIGURE 12B



1 2 3

FIGURE 13



TRV RNA-2 SeqID 3 (+/-)

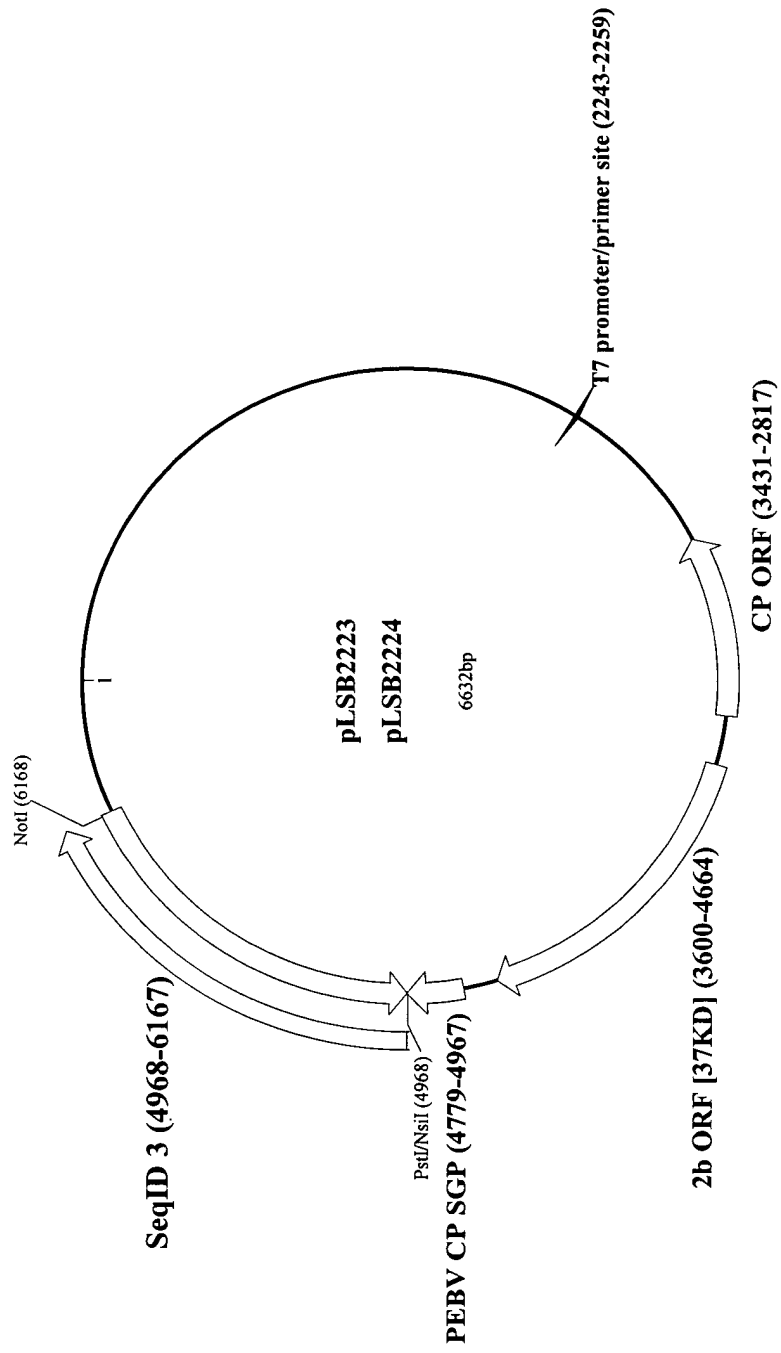


FIGURE 14

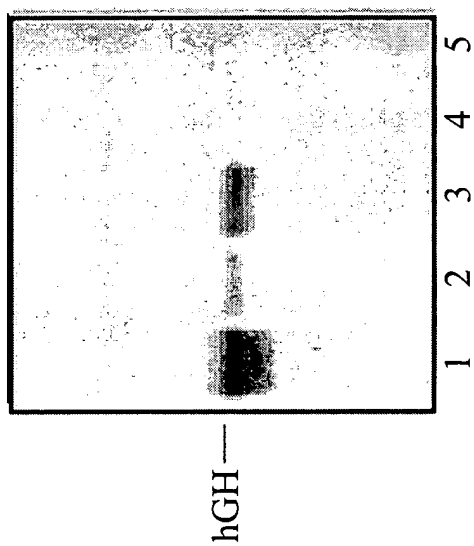


FIGURE 15



Figure 16AA

Seq_ID_17	.....	0
Seq_ID_7	.....	0
Seq_ID_11	.....	0
Seq_ID_14	.....	0
Seq_ID_15	.....	0
Seq_ID_4	.....	0
Seq_ID_3	.....	0
Seq_ID_10	gctagcacccaacccctctctaccaaaggaaagaactcttcctttcagtagagaact	60
Seq_ID_5	.....	0
Seq_ID_8	.....	0
Seq_ID_16	.....	0
Seq_ID_13	.....	0
Seq_ID_12	.....	0
Seq_ID_9	.....	0
Seq_ID_6	.....	0
Consensus		

Seq_ID_17	GGCCAATTGTATTACTATGTATTTCTTGCTCCTTACTATCTTATTACTTACTCTAAATCC	60
Seq_ID_7	.....	0
Seq_ID_11	.....	0
Seq_ID_14	.....	0
Seq_ID_15	.....	0
Seq_ID_4	.....	0
Seq_ID_3	.....	0
Seq_ID_10	tcCattTTcTggTtaccTGacacTgagaacCgcaAaaAgaTggcaAgaccCgggggcatg	120
Seq_ID_5	.....ccCacGCgtCcggtTtTtccATTctTTttcaTtAtTa.	37
Seq_ID_8	.....gtTtTtccATTctTTttcaTtAtTa.	25
Seq_ID_16	.....CacttTCtTcgtctTCTTcTTctTTctcCctctTaa	36
Seq_ID_13	.....	0
Seq_ID_12	.....	0
Seq_ID_9	.....	0
Seq_ID_6	.....	0
Consensus		

Seq_ID_17	ATTAACATATGGCAGAGTCAGAAACTTATATCATCCATATGGACTTATCAGCCATGCCTAA	120
Seq_ID_7	.....	0
Seq_ID_11	.....	0
Seq_ID_14	.....	0
Seq_ID_15	.....G.....	1
Seq_ID_4	.....	0
Seq_ID_3	.....	0
Seq_ID_10	gTTcttTcaacactAtTCctAAtgTTgTtTCATgtgTtTGttCaTgcagGCCAgaaCcAg	180
Seq_ID_5	tcTcttTcTGcCtcAcTCcGgtgaccATtTCcgtCcaATccgaTggTCatgaAacttTcA	97
Seq_ID_8	tcTcttTcTGcCtcAcTCcGgtgaccATtTCcgtCcaATccgaTggTCatgaAacttTcA	85
Seq_ID_16	tcTtctTcTttCtcAactctttAgTaATtTCAGtCcaATtGgacggTCataaAacttTcA	96
Seq_ID_13	.....	0
Seq_ID_12	.....	0
Seq_ID_9	.....	0
Seq_ID_6	.....	0
Consensus		



Figure 16AB

Seq_ID_17	AGCTTTTTCTAGCCATCAGAATTGGTACTTGACCACTCTTGCTTCTGTATCAGGTAGTTC	180
Seq_ID_7	.....	0
Seq_ID_11	.....	0
Seq_ID_14	.....	0
Seq_ID_15	.....	1
Seq_ID_4	.....	0
Seq_ID_3	.....	0
Seq_ID_10	AaaaagactTAcataatAacATGGacaagtcCaACatacctgctgaTtTtgatgAtcaC	240
Seq_ID_5	tcaTTcacgTttCCAaatccgaTaagcCccGtggtttTCaccaccCaccAcCAttggtact	157
Seq_ID_8	tcaTTcacgTttCCAaatccgaTaagcCccGtggtttTCaccaccCaccAcCAttggtact	145
Seq_ID_16	tagTacacgTgtCCAaatcccaTaagcCccacatctTtactaccCgccAaCAttggtact	156
Seq_ID_13	.....	0
Seq_ID_12	.....	0
Seq_ID_9	.....	0
Seq_ID_6	.....	0
Consensus		
Seq_ID_17	AAGTCTTGAACTGAAAGTAATAGAAATTCCTTTTCCTCATCAAACTA..GTATATGCT	238
Seq_ID_7	.....	0
Seq_ID_11	.....ACcc..cTcgAccna	13
Seq_ID_14	.....	0
Seq_ID_15	.....	1
Seq_ID_4	.....	0
Seq_ID_3	.....	0
Seq_ID_10	ActctgTGGtAtgactcaTctTtaAagTcagTaTcCaaaggCgccAacAtgcTtTAcACc	300
Seq_ID_5	cctcCaTcatcCgatccGT.....ttcccaaCaCccttctAaaAtccTcTAcACc	207
Seq_ID_8	cctcCaTcatcCgatccGT.....ttcccaaCaCccttctAaaAtccTcTAcACc	195
Seq_ID_16	cctcCaTcctcCgatcAGTctcttct.TcttcccaaCaCtctgccAaaAtccTtTActCT	215
Seq_ID_13	.....	0
Seq_ID_12	.....	0
Seq_ID_9	.....	0
Seq_ID_6	.....	0
Consensus		
Seq_ID_17	TACACTAACGCTATTCATGGTTTTAGTGCAACTCTTCTCCTTCTGAGCTACAAGTTATA	298
Seq_ID_7	.....	0
Seq_ID_11	cgCgncngC.CcAcgCgTccgcccAcgcgctcCgCTTCTCCTTCcGAGtacaAAGccATc	72
Seq_ID_14	.....	0
Seq_ID_15	.....	1
Seq_ID_4	.....	0
Seq_ID_3	.....	0
Seq_ID_10	TACAacAAATGtcATcCATGGcTactcaaCAcagCTaaCagCTgaTGAagccaAAtcTcTt	360
Seq_ID_5	TAtgaacgtGCcgccgtgGGcTTctcTGCAcgcCTcaCagCcgCTcAGgccgAtcagcTc	267
Seq_ID_8	TAtgaacgtGCcgccgtgGGcTTctcTGCAcgcCTcaCagCcgCTcAGgccgAtcagcTc	255
Seq_ID_16	TACGaTtAtGCTgccCgTGGTTTTctcTGCCcgTCTcaCTtCcgggcAGgctgAccggcTc	275
Seq_ID_13	.....	0
Seq_ID_12	.....	0
Seq_ID_9	.....	0
Seq_ID_6	.....	0
Consensus		



Figure 16AC

Seq_ID_17	AAAAATTCTCCAGGCTATCTTTCTTCAACTAAGGACATGACAGTTAAAATTGACACGACA	358
Seq_ID_7	.....	0
Seq_ID_11	AAgAATTCTCtAGGgTATgTTTCTTCgAtggAGGACAgGACAGTTAAAATTcACACGACC	132
Seq_ID_14	.....	0
Seq_ID_15	.....	1
Seq_ID_4	.....	0
Seq_ID_3	.....	0
Seq_ID_10	gAAcAgcaaCCtGGaATCTcTCggtccaTgAGGAagTGAgAtacgAgcTTcAtACcACT	420
Seq_ID_5	cgccgTatTCCcGGtgtaaTcTCcgtcctTcccGACgaagtAcgccAtcTccACACcACc	327
Seq_ID_8	cgccgTatTCCcGGtgtaaTcTCcgtcctTcccGACgaagtAcgccAtcTccACACcACc	315
Seq_ID_16	cgccgcatgCCtGGCgtggTcTCcgtcgtacctGACcgtgCacgTcAgcTTcACACcACT	335
Seq_ID_13	.....	0
Seq_ID_12	.....	0
Seq_ID_9	.....	0
Seq_ID_6	.....	0
Consensus		
Seq_ID_17	CACACGTCTCAATTCCCTTGGCCTAAATTCCGATTCTGGTGCATGG..CCAAAGTCAGACT	416
Seq_ID_7	.....	0
Seq_ID_11	CAttCaTCCcCatTTCC'TTGGCCTAAgcTCaatgTaTGGTtCATGG..CCAAAGTCAaACT	190
Seq_ID_14	.....	0
Seq_ID_15	.....	1
Seq_ID_4	.....	0
Seq_ID_3	.....	0
Seq_ID_10	CgatCccCTacATTtCTgGGaCTtgAaggacgTgaaaGTaaATcattCtttctTCAagCT	480
Seq_ID_5	CAtACccCTaccTTCTgGGaCTtgcTgaCtcTTtcGGccttTGG..CCcAAcTCcGAT	385
Seq_ID_8	CAtACccCTaccTTCTgGGaCTtgcTgaCtcTTtcGGccttTGG..CCcAAcTCcGAT	373
Seq_ID_16	CACACacCgaccTTCTaGGCCTcgcagattcaTtTGGgcttTGG..CCcAAcTCcGAT	393
Seq_ID_13	.....	0
Seq_ID_12	.....ctCcgAtcgaaatcctaaGTctAaattgCCAAgtTtgctag	41
Seq_ID_9	.....	0
Seq_ID_6	.....	0
Consensus		
Seq_ID_17	ATGGCAAA...GATGTTATAGTTGGATTAGTTGACACA.GGGATTTGGCCAGAGAGTAA	471
Seq_ID_7	.....t.GGtATcaacgCAGAGtGccA	21
Seq_ID_11	ATGGCAAA...GgTGTATcaATTGGtgTAGTTGatACA.GGGgTTTGGCCAGAGatTAA	245
Seq_ID_14	.....GgcGTgATtaTcGGAgTtaTaGACACT.GGaATTgttCCtGAccaTcc	47
Seq_ID_15	.....GgcGTgATtaTcGGAgTtaTaGACACT.GGaATTgttCCtGAccaTcc	48
Seq_ID_4	.....GgcGTgATtaTcGGAgTtaTaGACACT.GGaATTgttCCtGAccaTcc	47
Seq_ID_3	.....GgcGTgATtaTcGGAgTtaTaGACACT.GGaATTtCCtGAccaTcc	47
Seq_ID_10	gaaaCAaggagtGAGGTcATtaATTGGtgTgcTgGACACT.GGtgTTTGGCCtGAatcaAA	539
Seq_ID_5	AcGctgAt...GATGTcATcGTcGGAgTtcTgGACACg.GGtATaTGGCCgGAaAGacc	440
Seq_ID_8	AcGctgAt...GATGTcATcGTcGGAgTtcTgGACACg.GGtATaTGGCCgGAaAGacc	428
Seq_ID_16	AcGctgAt...GAcGTcATcGTcGGggTgcTcGACACg.GGcATTTGGCCcGAaAGgcc	448
Seq_ID_13	.....	0
Seq_ID_12	AgccagAAatctctcaagtgcccaGaAgcctTgagCgCgaGGtgccTGGCCttAatcagA	101
Seq_ID_9	.....	0
Seq_ID_6	.....	0
Consensus	g gt at t ggagt t gacac gg attt cc ga c	
	Conserved Region A	



Figure 16AD

Seq_ID_17	AAGCTAT.AATGATAATGGGATGACTGAAGTTCCATCAAGATGGAAAGGAGAATGTGAAA	530
Seq_ID_7	ttaCggccgggGATgATGGGATtAgTGAAGTaCCATCAAGATGGAAAGGAGAATGTGAAA	81
Seq_ID_11	AAGCTtT.gATGATgATGGGATGAgccAAGTTCCATCAAGgTGGAAAGGAatATGTcAAA	304
Seq_ID_14	ttcaTtT.AgcGAcgtTGGGATGcCTcctccgCCtgCtAaATGGAAAGGAtttTGTGAgT	106
Seq_ID_15	ttcaTtT.AgcGAcgtTGGGATGcCTcctccgCCtgCtAaATGGAAAGGAtttTGTGAgT	107
Seq_ID_4	ttcaTtT.AgcGAcgtTGGGATGcCTcctccgCCtgCtAaATGGAAAGGAtttTGTGAgT	106
Seq_ID_3	ttcaTtT.AgcGAcgtTGGGATGtCTcccccgCCtgCtAagTGGAAAGGAtttTGTGAgT	106
Seq_ID_10	AAGTtTt.gATGAcAcTGGAcTaggTccAGTcCCtatgAGcTGGAAgGGtGAGTGccAAA	598
Seq_ID_5	gAGTtTt.tccGAcgAgGGtcTctCTacgGTTCCtTCAAGtTGGAAAGGgaAgTGcGttA	499
Seq_ID_8	gAGTtTt.tccGAcgAgGGtcTctCTacgGTTCCtTCAAGtTGGAAAGGgaAgTGcGttA	487
Seq_ID_16	gAGCTtT.tccGAcggcGGGcTttCTGcAGTcCCtTCcgGtTGGAAAGGAaAATGcGAAA	507
Seq_ID_13	.....	0
Seq_ID_12	AAGCTtTt.AtTGATgAaGaatTGggaccAaTTCCATCtAagTGGAgAGGgattTaccAAA	160
Seq_ID_9	.....	0
Seq_ID_6	.....	0
Consensus	ttt gacg tggg t ct c t cct c a tggaaagga tg ga a	
	Conserved Region A	

Seq_ID_17	GTGGAACTCAATTTAATTCCTCTTTATGCAACAAGAACTCATTGGTGCGCGTTACTTCA	590
Seq_ID_7	GTGGtACTgAgTtCtAATTCCTCTTTgTgTAACAAGAAgCTCATTGGcGctCGTTACTTCA	141
Seq_ID_11	cTGGcACTCAgTTTAATTCtTCaTtTGCAACAAGAACTCATcGGaGctCGTTACTTCA	364
Seq_ID_14	cTaatttcacgaccAA.....gTGTAAACAACAACTCATTGGaGCCaGgTctTTC.	156
Seq_ID_15	cTaatttcacgaccAA.....gTGTAAACAACAACTCATTGGaGCCaGgTctTTC.	157
Seq_ID_4	cTaatttcacgaccAA.....gcGTAAACAACAACTCATTGGaGCCaGgTctTTC.	156
Seq_ID_3	ccaatttcacgacaAA.....gTGTAAAcAAGaTCATaGGactcaGgTctTTt.	156
Seq_ID_10	tTGGcAagaAcTTcAAAgCaTCAagcTGtAAcCgGAAACTCATTGGTGcAaGgTttTTCt	658
Seq_ID_5	cTGGAcCTgAtTTTccTgaaaCcTcATGtAAtAAAAaTCATaGGcGCTCaaatgTTtt	559
Seq_ID_8	cTGGAcCTgAtTTTccTgaaaCcTcATGtAAtAAAAaTCATaGGcGCTCaaatgTTtt	547
Seq_ID_16	cTGGgctggAcTTTccTgCaaCTTcATGtAAcCgtAAAAaTCATcGGTGCTCGaTtgTTtt	567
Seq_ID_13	.....	0
Seq_ID_12	aTaattCTgAtcacAcc...TtTTagTGCAaAgGAAgCTaATTGGaGcAaGgTACTTCA	217
Seq_ID_9	.....	0
Seq_ID_6	.....	0
Consensus	ct a aa tgaacaa aaactcat gg gc g t ttc	

Seq_ID_17	ACAAAGG.....CCTAATTGCCAATA...ATCCGAATATTACCATCTCGATGAATTTCAG	641
Seq_ID_7	AtAAAGG.....CCTAcTTGCCAAcA...ATCCaAATcTTAatATtTCaATGAATTCTt	192
Seq_ID_11	AtAAAGG.....aCTAcTTtCtAAag...tgaaaAATcTTACCATCatGATaAATTCTg	415
Seq_ID_14	.....CcgcT...tgAc.....AATgggtc	172
Seq_ID_15	.....CcgcT...tgAc.....AATgggtc	173
Seq_ID_4	.....CcgcT...tgAc.....AATgggtc	172
Seq_ID_3	.....CgAtTatCtgAa.....gATaCcc	175
Seq_ID_10	cacAAGGttatgaagcAgcTttCgggg...caattgATgagACCAcagaatccAAGTCAC	715
Seq_ID_5	ACAAAGGgtatgaagctAaacatgg...cccaatGgATGaatCaAaagaatcaAAaTCGc	616
Seq_ID_8	ACAAAGGgtatgaagctAaacatgg...cccaatGgATGaatCaAaagaatcaAAaTCGc	604
Seq_ID_16	ACAAAGGttacgaagctgaTcgtggaAgcccaattgAcgaatCtAaagaatctAAaTCGc	627
Seq_ID_13	.....	0
Seq_ID_12	ACgAAGGatacgtgactcTaGCaAgat.....cTcTcAattcaagttTctAcaCAC	268
Seq_ID_9	.....	0
Seq_ID_6	.....	0
Consensus	aagg c t tg aa c c	



Figure 16AE

Seq_ID_17	CTCGTGACACTGATGGGCATGGAACCTCACATCCTCTACAGCTGCAGGAAGTCATGTAG	701
Seq_ID_7	CTaGaGAtACcGATGGaCATGGAACCTCACActTcTCTACAGCTGCgGGAAGTtATGTtG	252
Seq_ID_11	CcCGTGATACaGAgGGaCATGGAACCTCatActTCCTCTACAGCTGCtGGAAGTctTGTAa	475
Seq_ID_14	CcataGATgaaaATGGaCATGGtACgCatACAgCaagcACAGCTGCAGGAgccttTGtga	232
Seq_ID_15	CcataGATgaaaATGGaCATGGtACgCatACAgCaagcACAGCTGCAGGAgccttTGtga	233
Seq_ID_4	CcataGATgaaaATGGaCATGGtACgCatACAgCaagcACAGCTGCAGGAgccttTGtga	232
Seq_ID_3	CgataGAtACTGATGGaCATGGtACaCACActgCtagcACAGCTGCAGGAgcTttTGtga	235
Seq_ID_10	CaaGgGACgaTGATGGcCATGGgACaCACActgCaaCTACAGCaGctGGctcggtTGTAa	775
Seq_ID_5	CaaGaGAtACTGAaGGaCATGGAACaCaTACAgCaTcaACAGCaGctGGttcTttaGTgG	676
Seq_ID_8	CaaGaGAtACTGAaGGaCATGGAACanAtACAgCaTcaACAGCaGctGGttcTttaGTgG	664
Seq_ID_16	CaaGaGAtACTGAaGGaCATGGgACTCACActgCtTcaActGCaGctGGAtcTgtTGTAAG	687
Seq_ID_13	.....	0
Seq_ID_12	CaCGaGACACTGATGGaCATGtttCcCACACGcagTtcAagGaTcaAGtggtTCccGgta	328
Seq_ID_9	.....	0
Seq_ID_6	.....ggCCatTACgGCCGggcacgtgaATCCCTG	29
Consensus	c agagatac gatggacatgg ac ca ac gc acagctgc gga ct ttgt	
Conserved Region B		

Seq_ID_17	AATCTGCATCTTATTTTGGCTATGCGCGTGGTTCTGCTACAGGGATGGCACCAAGGCTC	761
Seq_ID_7	AaggTGCATCTTATTTTGGCTATGCcaccGGTactTGCTAttGGcATaGCgCCAAAGGCTC	312
Seq_ID_11	AaggTGCGTCTTATTTTGGCTATGCcCtTGGTtTGCaAtAGGcgTcGCACCAATGGCTC	535
Seq_ID_14	AaggTGCTaaTgtaTTTGGgaATGCCaaTGGaaCaGcagttGGtgTtGCCcCtcttGCgt	292
Seq_ID_15	AaggTGCTaaTgtaTTTGGgaATGCCaaTGGaaCaGcagttGGtgTtGCCcCtcttGCgt	293
Seq_ID_4	AaggTGCTaaTgtaTTTGGgaATGCCaaTGGaaCaGcagttGGtgTtGCCcCtcttGCgC	292
Seq_ID_3	AaggTGCCaaTTtcTTTGGtaATGCaTGGCaCaGcagttGGtgTtGCCcCtcttGCCc	295
Seq_ID_10	cgggaGCTagcctcTTTGGtTATGCTgcTGGCaCaGcagtgGGATGGCttCAcAtGCaa	835
Seq_ID_5	cAaaTGCTagcTtTTaccaaTATGCCaaaGGT.....ATGGCtatAAAAGCaa	724
Seq_ID_8	cAaaTGCTagcTtTTaccaaTATGCCaaaGGTgaaGCTAgAGGtATGGCtatAAAAGCaa	724
Seq_ID_16	ctaacGCTagTTtTTTcaaTAcGCaTaaGGTgaaGCTAgAGGcATGGCtggtAAaGCTC	747
Seq_ID_13	.....	0
Seq_ID_12	tggaaa.....TGGaacaGCAaagGGTggatCacCAaaagTaagAgtAgcaGCTt	378
Seq_ID_9	.....cccaGcggtCggaTGGTgCaG.gACAcataAatCcaCgAAaagct	44
Seq_ID_6	AATCgGCTatTgATccgGGCctaataatacGacaCTG..AtAcataGaCtaCATcaaCct	87
Consensus	aag tgcta t t tttgg atgccaatggt cagc gg t gc ca gc	
Conserved Region B		

Seq_ID_17	ATGTGGCAATGTACAAGGCTTTGTGGGAAGAAG...GTACAATGTTATCTGATATTCTGG	818
Seq_ID_7	ATGTGGCTATGTACAAGGCTcTaTGGGAAGAAG...GTgtAtacTgTCTGATgTCTtG	369
Seq_ID_11	ATGTGGCTgTGTACAAGGCTcTcTGGGATGggG...ccggtAccaTtTCTGATATTCTtG	592
Seq_ID_14	AcaTaGcCaTaTaTaAAGGtaTgcgGttctGAtGgcgtTtgttctgatgtTGAAATTtTaG	352
Seq_ID_15	AcaTaGcCaTaTaTaAAGGtaTgcgGttctGAtGgcgtTtgttctgatgtTGAAATTtTaG	353
Seq_ID_4	AcaTaGcCaTaTaTaAAGGtaTgcgGttctGAtGgcgtTtgttctgatgtTGAAATTtTac	352
Seq_ID_3	AcaTGGCcATaTaTaAAGGtaTgcaGttttGcta...cTgtAgtgaAaCTGATgcTtTaG	352
Seq_ID_10	gaTGGCTgcaTaTaAaGtaTgtTGGGctGgAG...GatggtTtagcagcGAcATaCTaG	892
Seq_ID_5	gaaTaGCcgctTACAAGatTTgcTGGaAAaAtG...GctggtTtaatTCTGATATatTGG	781
Seq_ID_8	gaaTaGCcgctTACAAGatTTgcTGGaAAaAtG...GctggtTtaatTCTGATATatTGG	781
Seq_ID_16	gaaTaGCAGctTatAAGatcTgtTGGaAAacAG...GgtggtTtgatTCTGATATTtTaG	804
Seq_ID_13	.....	0
Seq_ID_12	AcagaGtttgcTggcctcCaaTtatGGgcagtG...GgtgctTtgatTCaGATATctTGG	435
Seq_ID_9	gTtgacCctgGtttggtttaTgacataggGgcGcagGattAcTtcgAatTcctTATgCaca	104
Seq_ID_6	ActatGCAGctTgaActaCacaGaGaaAgaAAtgaaacttttcacgAaCgagTcaaaTcc	147
Consensus	a atagc ta aaggtatg gg ga g g tggt t at ctgatatttt g	
Conserved Region B		



Figure 16AF

Seq_ID_17	CTGCAATTGATCAGGCAATTGAGGATGGAGT..GGATATAATATCCTTATCATTAGGCAT	876
Seq_ID_7	CTGCAATTGATCAaGCAATTacaGATGGtGT..GGATgTctTATCCTTgTCgTTAGGCAT	427
Seq_ID_11	CTGCAAtTgGATCAGGCAATTGcGGATGGttg..tGATATctTATCCTTgTCATtTGGCgc	650
Seq_ID_14	CTGCgATgGATgtaGctATTGAtGATGGcGT..aGATATtcTATCaaTATCccTtGGtgg	410
Seq_ID_15	CTGCgATgGATgtaGctATTGAtGATGGcGT..aGATATtcTATCaaTATCccTtGGtgg	411
Seq_ID_4	CTGCgATgGATgtaGctATTGAtGATGGcGT..aGATATtcTATCaaTATCccTtGGtgg	410
Seq_ID_3	CTGCCAtgGATgcaGctATaGAtGATGGtGT..aGATATcAtTtCCgcATCtcTAGGCgg	410
Seq_ID_10	CaGggATgGATCAGGCcgTcataGATGGtGT..aaATgTAcTcTCacTgTCccTtGGtgg	950
Seq_ID_5	CTGCCAtgGATCAaGctgTTGAtGATGGtGT..GcATgTgATcTCacTtTctgTtGGggc	839
Seq_ID_8	CTGCCAtgGATCAaGctgTTGAtGATGGtGT..GcATgTgATcTCacTtTctgTtGGggc	839
Seq_ID_16	CTGCAATgGATCAaGctgTTGctGATGGAGT..tcAcgTgAtTtCtcTtTCcgTtGGCgc	862
Seq_ID_13	.....	0
Seq_ID_12	tTGCTtTTGATtTGGtAATTGAtGATGGcGT..GGAcgTgcTtTCagTcTCacTtGGagg	493
Seq_ID_9	CaaCAAcTcAgCccttcAcaGctaAcaGttTtGGAAggttctcCaacAgaAcTtGcCAT	164
Seq_ID_6	tTGctcggtTtTtactggaTctccActtgaTcttaActatccATCacTtTctgTtatgtT	207
Consensus	ctgc atggatc agc attgatgatgg gt gat t t tca t tc ttgg g	
Seq_ID_17	AGATGATC...TTGCTTTATATG.....AGGATCCGGTAGCTATTGCCACATTTGCA	925
Seq_ID_7	AGAGCgga...TTcCacTAcAcG.....AaGATCctGTgGCaATTGCCgCATTTGct	476
Seq_ID_11	AGtTtTccatTccCTcTATATa.....taGATCCtaTctCTATTGcttCATTTtCt	702
Seq_ID_14	AacTagTaa...TcCgTTccATa.....AtGAcAaGaTtGCTcTTGgggCgTaTagt	459
Seq_ID_15	AacTagTaa...TcCgTTccATa.....AtGAcAaGaTtGCTcTTGgggCgTaTagt	460
Seq_ID_4	AacTagTaa...TcCgTTccATa.....AtGAcAaGaTtGCTcTTGgggCgTaTagt	459
Seq_ID_3	AttTacTaacgcTcCaTTacATG.....AtGAcCctAAttCtCTTGgCgCgTacagt	462
Seq_ID_10	cacaatTtc...TGaTTatTAcA.....gGGATataGTAGCaATTGgaggATTTtCt	999
Seq_ID_5	taAcGgTtatgctCcAcacTATctgt....AtGATtCtaTtGCaATTGgagCtTTTGgt	894
Seq_ID_8	taAcGgTtatgctCcAcacTATctgt....AtGATtCtaTtGCaATTGgagCtTTTGgt	894
Seq_ID_16	tGAcGgTtatgcacCggaATATGatg....cGGATtCtaTtGCTATTGgagCtTTTGgt	917
Seq_ID_13	.....	0
Seq_ID_12	AGATacTg.....gagcATATGtca....AtGActCtGTAGCTATTGgttCATTTcat	542
Seq_ID_9	cacTcgctt.gcTaaTccAgggGact....tGaActaccccGCCATTtCtgCagTTttt	218
Seq_ID_6	caggccTgattcctCTgTtcATGttgttaagAGGAcattaacaCatgTcgCggtTTctaA	267
Consensus	aa t t a tcc t at a ga ctat gctattgg gc ttt t	
Seq_ID_17	GCAATGGAGAAAGATATATTTGTTTCCACTTCAGCTGGAAATGAAGGGCCTGACGATCAG	985
Seq_ID_7	GCAAtTGGAGAAAGgTATATTTGTTTCCAcTcTcGCaGAAATGAAGGGCCTtAttATgAG	536
Seq_ID_11	GCAATGGAGAAAGgcATATTTGTTTCCgtTTCAGCTGGAAATGAAGGGCCTtTCGATCAa	762
Seq_ID_14	GCAAcAaGaaAgAGgTATtcTTGTTagtTgTTCTGCaGGcAATagtGGtCCattCcAaCgc	519
Seq_ID_15	GCAAcAaGaaAgAGgTATtcTTGTTagtTgTTCTGCaGGcAATagtGGtCCattCcAaCgc	520
Seq_ID_4	GCAAcAaGaaAgAGgTATtcTTGTTagtTgTTCTGCaGGcAATagtGGtCCattCcAaCgc	519
Seq_ID_3	GCAAcAaGaaAAAGgTATtcTnGcTagtgCcTcTcGCaGGcAATagcGa...gtttGATaAc	519
Seq_ID_10	GCAgcttctcAAGgaATcTTcGTcTCgtgcTCgGCTGGgAATGgcGGGCCaGgCtcTgga	1059
Seq_ID_5	GCAAtcGAacAtGgcgTccTcGTcTCatgTTCAGCTGGAAATtctGGtCCcGgaGcTtAt	954
Seq_ID_8	GCAAtcGAacAtGgcgTccTcGTcTCatgTTCAGCTGGAAATtctGGtCCcGgaGcTtAt	954
Seq_ID_16	GCTtcaGAacAtGgcgTtgTTGTcTctgcTcTcGCTGGAAActccGGtCCcGgtGcTtcc	977
Seq_ID_13	.....	0
Seq_ID_12	GttgTtaAGcAcGgcATtgTTGTcgttACcTcTcGCTGGtAAActcgtcctgggtCcgggtAc	602
Seq_ID_9	cCtgaaGA.cgcaAaAgTtTcaacgCtgacgCttCacagAACagtcacCaatgtGggttc	277
Seq_ID_6	GCctgaGgtgtAcAaAgtaaaGaTaCtgaaTcTgaattctgaaAAGGttagtttaAgTAt	327
Consensus	gca c ga aagg att ttgtt ct tctgc gg aat gg cc t at a	



Figure 16AG

Seq_ID_17	GCTTTGCACAACGGAACACCTTGGGTCTAACTGTTGCTGCTGGCACAGTTGATCGCGAA	1045
Seq_ID_7	aCTTTGCACAAtGGAACACCTTGGGTgtTAACTGTTGCaGCTGGCACAGTTGAcCGCGAA	596
Seq_ID_11	tCTTTGagCAAtGaggCACCTTGGtTCTctCTGTGCTGCTaGCACAGTTGATCGgGAc	822
Seq_ID_14	aCTgTagACAAtGacgCcCCTTGGaTTCTcACaGTTGgcGCTaGCACtcaTGATaGaaAA	579
Seq_ID_15	aCTgTagACAAtGacgCcCCTTGGaTTCTcACaGTTGgcGCTaGCACtcaTGATaGaaAA	580
Seq_ID_4	aaTgTaaACAAtGacgCcCCTTGGaTTCTcACaGTTGgcGCTaGCACtcaTGATaGaaAA	579
Seq_ID_3	cCTgTagcaAAtaatgCcCCTTGGaTTCTcACaGTTGgcGCTaGCACccaTGATaGaaAA	579
Seq_ID_10	tCccTctcCAACGctgCACCaTGGaTaactACTGTaGgTGCgGGgACcaTgGAcCGCGAA	1119
Seq_ID_5	aCggcagtgAACattgCcCCgTGGaTgCTcACTGTTGgTGCatcaACtaTaGATCGtGAg	1014
Seq_ID_8	aCggcagtgAACattgCcCCgTGGaTgCTcACTGTTGgTGCatcaACtaTaGATCGtGAg	1014
Seq_ID_16	aCggcGgtCAACGttgCgCCgTGGaTTCTcACcGTTGCTGCTtcaACgaTaGAcCGgGAg	1037
Seq_ID_13	.....	0
Seq_ID_12	aaTtCaGaaAA.attgCACCTTGGcTcaTAACTGTTGgcGCgaGaaCtaTgGATtGtcAg	661
Seq_ID_9	tCcaatatCAAattAcCAtgTTaGagTCTcgCcGTTcaaaggtGCAGtcgTGAagGttgA	337
Seq_ID_6	aagcccaAtggaGctgatgtTcaatgaaTcttTaagGaaaCaaaggtAtaTGgTCa..AA	385
Consensus	act t caa g gc ccttgattctcactgttgg gct gcac ttgatcg aa	
Seq_ID_17	TTTATCGGGACACTAAGTCTGGGTAAATGGAGTTTCAGTCACTGGTTTATCTCTCTACC..	1103
Seq_ID_7	TTTATtGGAACAtTAACtCTtGGaAATGGAGTTTCAGTCCcCTGGTTTATCgCTaTACC..	654
Seq_ID_11	gTTATCaGGAtAtTAACtCTtGGTAATGGAGTTTCAGTCACTGGTTTATCTCTCTACC..	880
Seq_ID_14	cTaAagGccACtgTtAagCTtGGaAATaaAGaagaAtTtgaaGGagaATCTgctTatCat	639
Seq_ID_15	cTaAagGccACtgTtAagCTtGGaAATaaAGaagaAtTtgaaGGagaATCTgctTatCat	640
Seq_ID_4	cTaAagGccACtgTtAagCTtGGaAATaaAGaagaAtTtgaaGGagaATCTgctTatCat	639
Seq_ID_3	cTaAaaGccACcgTtAagCTtGGaAATaaAGaggaAtTtgaaGGagaATCTgctgAtCag	639
Seq_ID_10	TTcccaGcatataTtAGcCTtGGaAATGGAAAAaaAtTCAGTGGagTATCaCTtTACagt	1179
Seq_ID_5	TTcccgGcagatgTtAtTtTaGGagATaatagaatAtTtggTGGTgTtTCatTgTACTcc	1074
Seq_ID_8	TTcccgGcagatgTtAtTtTaGGagATaatagaatAtTtggTGGTgTtTCatTgTACTcc	1074
Seq_ID_16	TTTccgGctgatgTtAtTtTaGGagATGGcagaatAtTCggTGGcgTATCcCTgTAttcc	1097
Seq_ID_13	.....	0
Seq_ID_12	TTTccCaGctataTcAtTtTaGGAACaaAaagcagtaCAaTt.TgaAaCaCTgccCaaa	720
Seq_ID_9	gccATCaaGAttgaAttTCaccagcAaacAccagaAactAtccttacaAggTgatTttCga	397
Seq_ID_6	TTTgagaGccatCatAtatTcaacAgcaGcaggaaAaTagCTGagcaAatggcgTttgggt	445
Consensus	tt a gc a tgta tct ggaaata a a aatt g tgg g atc t ta c	
Seq_ID_17	.CCGGGAATTCCAGTTCAAGCGAAAGCTCCATCGTTTTTCTCAAGAC...ATGCCTAGA	1158
Seq_ID_7	.CtGGGAATTctAGTTCAAGCGAAAGCTCCctTgTcTaTgTCga.....ATGCCaAGA	706
Seq_ID_11	.CtGGGAATTctA...CAAGCGATAttTctgTtaTTcTTgTCAAGAA...tTGCTTAGA	932
Seq_ID_14	cCaaaGacTTCaAacTCAAcattcttCaCtcTatTTgaTgTtgAaAa...gATagtagac	696
Seq_ID_15	cCaaaGacTTCaAacTCAAcattcttCaCtcTatTTgaTgTtgAaAa...gATagtagac	697
Seq_ID_4	cCaaaGacTTCaAGcTCAAcattcttCaCtcTatTTgaTgTtgAaAa...gATGtagac	697
Seq_ID_3	cCaaaGacTTCaAacTCAAcattcttCaCtcTatTTgaTgctggaAa...gAatgCaAGt	696
Seq_ID_10	ggaaaagcaTtaccTagttctGtgAtgcCacTgGTgTaTgctggaA...ATGCCagcc	1234
Seq_ID_5	ggCaatccTTtgAccgatgcCaAattgCggTgGTTTaTtcCggcgac..tgTGgtagcA	1132
Seq_ID_8	ggCaatccTTtgAccgatgcCaAattgCggTgGTTTaTtcCggcgac..tgTGgtagcA	1132
Seq_ID_16	ggCGatccgctCgGggattcaaAgctacCtcTtGTTTactcCggtgac..tgcGggagtc	1155
Seq_ID_13	.....	0
Seq_ID_12	tgCatGttcTtCccTattAataAtgttgCttcaGcaaaagctccccatgcttcaaCTgac	780
Seq_ID_9	gaCaaaAtaTCgtcaaaaAGCacgtGaatttggTaTcccTgctttGgaaa.gATGggacac	456
Seq_ID_6	tCgatatcTTgggagagtgaAaAgcaCaatgTtaggagcCcCtttgCtggtATGtgggtt	505
Consensus	c aagacttc a aac a t ct t tt atgc g a atgg a	

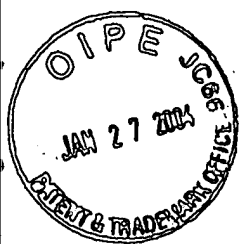


Figure 16AH

Seq_ID_17	GGAGAAGGAAGTGGAGAAAAATGCACA..CAAATTCGAGTCTGCTATGACAC.....	1209
Seq_ID_7	tGacAAGGAAGTGCAGAAAAATGCACA..CAAATtGttGTCTGtctcGACAA.....	757
Seq_ID_11	taAGcAGGAATGcAaAAtgtTaCAGa..CAAATtGtgGTCTGcAtTGACAA.....	983
Seq_ID_14	GagcAAccAgtaGccccctttcTGCAtAc.CAggaTCaCtcaCTGacccttCt.....	747
Seq_ID_15	GagcAAccAgtaGccccctttcTGCAtAc.CAggaTCaCtcaCTGacccttCt.....	748
Seq_ID_4	GagcAAccAg.aGccccctttcTGCAtAc.CAggaTCaCtcaCTGacccttCtataagggg	755
Seq_ID_3	GatcAAGatg...ctccAttcTGtAgAt.CgtgggCGatGaCTGaTcctgCtatcaaagg	752
Seq_ID_10	aagcAtcaAA.TGGcaAtttATGCACA....AgTgGtAGTCTGaTtccAgAaaaagttg	1288
Seq_ID_5	aatactGttAtccagGAAAgcTagAtcc.tAAAAaaGtcGcagGaaAaattgttt.....	1186
Seq_ID_8	aatactGttAtccagGAAAgcTagAtcc.tAAAAaaGtcGcagGaaAaattgttt.....	1186
Seq_ID_16	aactctGttAtccagGAAtgcTGgAtcc.ttcAaagGtAGcCgGaaAaattgtat.....	1209
Seq_ID_13	.....	0
Seq_ID_12	GatGctctcttatGcaAAgctgGggCAT.tggAccCaaAGaagGtaAaGgtAacta....	835
Seq_ID_9	acAaAgtGagaaGcAcAAAttgTGatCAC.atggcTaGCAtcaattTAGttCAgcttg...	512
Seq_ID_6	cagcAAaattttcaataAcAgtaGattAtaCAAAATaaCttaaTatgtacAttgttgtatc	565
Consensus	a aa a t g aat tg a a ca a t g g ctga c	
Seq_ID_17	.....GAACGGATCAGTAAGTGACCAATTGTACAAT.G	1241
Seq_ID_7	.....GAAtGatTCgGTtgGTGAGCAtgTGTACAAT.G	789
Seq_ID_11	.....aAACGcATtgGTcgGgaAaCAAgTtgAaAgT.G	1015
Seq_ID_14	.....	747
Seq_ID_15	.....	748
Seq_ID_4	aaagatagttgtgtgcctgggttggtggtggCGttcgtacgggTGataAAggacAagtT.G	814
Seq_ID_3	taagatagttgtgtgtcaaaaagacccaAgtaGtctcaccAGTagtCAAggacgaAAT.G	811
Seq_ID_10	atgggaaaattgtatgtgtgacagagGgAtGaATgcaaggGcacagAAggGTttggTtG	1348
Seq_ID_5	.....tatgcgatagggGaggcaAcgctaggGTtgaaAAagGgAgTgcgG	1231
Seq_ID_8	.....tatgcgatagggGaggcaAcgctaggGTtgaaAAagGgAgTgcgG	1231
Seq_ID_16	.....tatgtgatcgagGcggaCAAtgctagAGTagagAAagGaAgTgcaG	1254
Seq_ID_13	.....gAcagAaTtgaaAAagGacaAgctG	25
Seq_ID_12	.....ttttagtttgtctaagagGagataATacGaggGTtgaCAAggGacagcaaG	886
Seq_ID_9	.....ccatttagtaactagcattttGttTgctgAgGatAatAAAAaacatgTtG	562
Seq_ID_6	tgttgtatcgtcgtacctctagcctccGagtatgTactatgtTGtattAcgtacCtcTaG	625
Consensus	ga t c ggt a aa gg t g	
Seq_ID_17	TAAAAACACAAAGTTGCTGGTGGCATCTTCATAACAAATTAC.....ACTGACTTGG	1295
Seq_ID_7	TAAgAAAAttCAAAAGTTGCTGGGgGctgTCTTTATAACTAATaca..... ACTGACTTGG	843
Seq_ID_11	TgAgAcAttCAAAtGcTGCTGGTgctgTCTTCATAACAAATgACtttgctACTGACTTGG	1075
Seq_ID_14	.....	747
Seq_ID_15	.....	748
Seq_ID_4	TAAAggAtgCtggAGgTGtTGGcatgATtcTtATcAatAATccagaagatggTGttacta	874
Seq_ID_3	TAAAggACgCtggAGgcGtTGGcatgATtcTCATcAatAATccggaagatggTGtCacta	871
Seq_ID_10	TcAAAgAtgCtggGtGgaataGGgatgATtTTggcAAacAcagACtcttacggaGAtgaGt	1408
Seq_ID_5	TgAAAgCaggCaggcGgaGtaGGgatgATacTtgctAatttggtgactccggcGAagaac	1291
Seq_ID_8	TgAAAgCaggCaggcGgaGtaGGgatgATacTtgctAatttggtgactccggcGAagaac	1291
Seq_ID_16	TgAAAttagCgggcGgTGCaGGTatggTCcTggcgAatttagctgactccggcGAagaac	1314
Seq_ID_13	TAAAgAACgCtggAGgcGtTGGcatgATtcTCATcAatcggcttcaggacggTtcaacta	85
Seq_ID_12	ctgctttggCaggtGcaGtTGGaacgATtcTagccAacgATTAtgcatctggcGATgaaa	946
Seq_ID_9	cggcAAAgtCcttgTgtTtTcagcagtTgTTttcAgTAgAaaAtagtttcttTtgtTcat	622
Seq_ID_6	c.....CtCtgAgtaTGtactatGttgtaTCATcgtAccTctagcctccgagtAtgTac	679
Consensus	t aa a gc gg gg gttgg a gat t aa cgg ga	



Figure 16AI

Seq_ID_17	AATTCTACCTCCAAAGC..GAATTCCC	1353
Seq_ID_7	AATTCTACCTCCAAAGC..GAATTCCCG	869
Seq_ID_11	gcgaaTACCTCaAAAcA..GAATTCCCatCTGTGTTcTGAAtTTccAAaATGGTGATcA	1133
Seq_ID_14	.....	747
Seq_ID_15	.....	748
Seq_ID_4	AATcagctgaagctcat..GtccTtCCaGCaTGgaTgTttcagaTgcAGATGGaaAgAA	932
Seq_ID_3	AATcagctactgctcat..GttcTtCCcGCatTagaTgTttcacaTGAAGAAgGaGAgAA	929
Seq_ID_10	tggTtgctgatgcnat..ctcaTaCCaaCaGgtgcagTtggtcaaactGcTGGTGAntt	1466
Seq_ID_5	tcgTCgcCgattcAcat..cttcTCCCGGCgacGaTggTcgggtcaaaAAGcTGGaGAcAA	1349
Seq_ID_8	tcgTCgcCgattcAcat..cttcTCCCGGCgacGaTggTcgggtcaaaAAGcTGGaGAcAA	1349
Seq_ID_16	tcgTCgcCgattcAcat..ctccTaCCGGCgacaaTggTcgggtcaaaAAGccGGTGAcgA	1372
Seq_ID_13	AATcagcCgatgctcat..GtccTtCCGGCccTGgaTgTttcaTTTtttGATGGattTca	143
Seq_ID_12	tTTTtgctgattctctCtcGtcTTaCCtGCTacGcaaaTtAgtTactGATGGactTgA	1006
Seq_ID_9	tAcTagctacttAtAtt..GccaaattattTGTGgcagctA.CTaaaAtGATGaattTgg	679
Seq_ID_6	tAcgtTgtaTtacgtaCctctAgcCtCtGagtatgTacTatgtTgTatcaAcGtaccTct	739
Consensus	t gc t c cat gt t cc gc g gt a gatgga a a	
Seq_ID_17	AGTTTTGGAGTACATCAAGAATAGCCATTACCAAAAGCAAGGCTTGAATTTCAAGTGAC	1413
Seq_ID_7	.....	869
Seq_ID_11	AGTTTTGaAaTatgTtAAcAgcActtcTTCACCAAAAGCAAAaGaTTGgAcTTCAAGgGAC	1193
Seq_ID_14	.....	747
Seq_ID_15	.....	748
Seq_ID_4	AaTTcTtGccTACATaAActcaAcgtcgaatCctgttGCTgcaaTcaccTTcCATGgaAC	992
Seq_ID_3	AaTTaaGGccTATaTaAAttcaActtcaaCctAttGCTgcaaTTacATTcCAGGgaAC	989
Seq_ID_10	gaTcnaaagGTACATtgcttTgaCagTaataCCAAttaCcAcaaTTGcATTtgAggtAC	1526
Seq_ID_5	AaTaagacActTACgTaAcGtcTgatCcTTCACCCAcgGCgAcGaTcGtgTTcagAGgaAC	1409
Seq_ID_8	AaTaagacActTACgTaAcGtcTgatCcTTCACCCAcgGCgAcGaTcGtgTTcagAGgaAC	1409
Seq_ID_16	AaTaagGGATACgTCAaatcTgattcaTACCAAAAGCgAcGaTTGttTTcaAAGgaAC	1432
Seq_ID_13	AaTTactGAGTATATgAAatcaAcaaAgaatCctgttGCTAGaaTTacATTcCAAGgaAC	203
Seq_ID_12	Act.....CtTtAgttcaAcaagTatACctAcAGcttccaTTacAcaTCCaAcGAC	1057
Seq_ID_9	caaTagGagccAaAaaAaaAaaAaaagggCggCcgcg.....	716
Seq_ID_6	AGccTccGAGTatgTagtatgTatatcaTtg..tAtctttAGGCcTcAaaaaaAaaaaAa	797
Consensus	aat ta t a tc a cc a gc a att tt agg ac	
Seq_ID_17	ACATCTGGTGCTAAA...CCAGCACCAAAAGTTGCTAGCTATAGCTCAAGGGGACCATC	1470
Seq_ID_7	.....	869
Seq_ID_11	ACtaaTTGGTGtcgAA...CgAGCACCAgctGTcGCgcatTtTAGtTCgAGGGGgCCATC	1250
Seq_ID_14	.....	747
Seq_ID_15	.....	748
Seq_ID_4	tgtactTGGaGaTAAA...aatGctCctAtAGTTGCTtcaTtTtctTctcGaGGACCAag	1049
Seq_ID_3	AgtaaTaGGaGaTAAA...aatGctCctAttGTTGCTtcaTtTtctgCtcGaGGACCAag	1046
Seq_ID_10	caAgtTgGGcGtccAA...CCAtCACCGgtcGTcGCagctTtTAGtTCcAGaGGgCCAAA	1583
Seq_ID_5	AgtgaTcGGaaaatcAccggCAGCACCAcgtGTaGCggcgTtctcgagccGaGGACCTaa	1469
Seq_ID_8	AgtgaTcGGaaaatcAccggCAGCACCAcgtGTaGCggcgTtctcgagccGaGGACCTaa	1469
Seq_ID_16	tgtaaTcGGaaaatcAccgtCtGctCCAcgtaTTGCTgcgTtctcaggccGaGGACCCaa	1492
Seq_ID_13	gataaTaGGcGaTAAA...aatGctCCAggtgcTTGCTgGtTtTtcaTctcGcGGACCAag	260
Seq_ID_12	t.taaTTGGgaacAAA..gCCAGctCCAgtaTaGCagcCTtTtcaTCAataGGACCTaa	1114
Seq_ID_9	.....	716
Seq_ID_6	AaAaaaaaAaaaaAaA.....	813
Consensus	t at gg a aa gc cc t gc tt g ggacc a	



Figure 16AJ

Seq_ID_17	AGAAAGCTGCCCTTTTATCCTCAAACCTGACCTGATGGCTCCTGGAGCCTTAATATTAGC	1530
Seq_ID_7	.....	869
Seq_ID_11	AatgAcCTGCCCGTTTATCCTCAAACCTGACCTGATGGCTCCaGGtcaCTTAATAcTAGC	1310
Seq_ID_14	.....A.....	748
Seq_ID_15	.....	748
Seq_ID_4	cGAAGcaaGtCgTggcATCtTgAAACCTGAtaTtATtGgTCCTGGtGttaatgTccTtGC	1109
Seq_ID_3	ccgAgcaaaaCCCTggcATCtTaAAACCTGAtaTtATtGgTCCTGGtGttaatATccTtGC	1106
Seq_ID_10	cccAAtCacaCCggagATCCTtAAACCaGAtTtTGATaGCaCCaGGtGtCaatATtctTtGC	1643
Seq_ID_5	tcAtttgacgCCggagATtCTtAAACCGATgTtATtGCaCCTGGAGttaacATtTTgGC	1529
Seq_ID_8	tcAtttgacgCCggagATtCTtAAACCGATgTtATtGCaCCTGGAGttaacATtTTgGC	1529
Seq_ID_16	ttAtgtaacaCCggagATCCTtAAACCGATgTtActGCaCCaGGAGtCaacATATTAGC	1552
Seq_ID_13	cacAgctaGtCCTggaATCtTgAAACCTGAtaTtATtGgTCCTGGtGttaatgTccTAGC	320
Seq_ID_12	cactgttacacCtggagATCCTtAAggtT..ttacgcaGgTtCatGAtttTTgacacgaC	1172
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus	a cc g atc t aaacc gat t at g cc gg gt t t gc	
Seq_ID_17	CTCATGGCCTCAAAAATCACCGGCAACTCAAATTCGCTCAGGAGAGCTTTTCAGTAACTT	1590
Seq_ID_7	.....	869
Seq_ID_11	tTCATGGtCTCcActATCATCtGtgAgTCCAtaT.....actGAaCTTcaCaATatCTT	1364
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	tgCtTGGCCTacctcAgtAgataaac...aAcAaa.....aAcacaaaatccAcaTT	1157
Seq_ID_3	tgCtTGGCCTaccAccgtgaatatccCcaAcAaa.....aAcacaaatttcTggaTT	1157
Seq_ID_10	tggcTGGaCaggAAAAgttggacCAACaggttTgCcagaAGacaccaggaatgtgggtTT	1703
Seq_ID_5	CggtTGGaCaggAtctgttggacCgACcgAttTggatattGacacGagaagagtagAaTT	1589
Seq_ID_8	CggtTGGaCaggAtctgttggacCgACcgAttTggatattGacacGagaagagtagAaTT	1589
Seq_ID_16	CggtTGGaCagggtccatAggacCAACagAttTggaaattGataccagacgagtggAaTT	1612
Seq_ID_13	agCtTGGCCTacttctgtcgaa..AAC.....aaaaCcaacaccaaTcaAc...aTT	368
Seq_ID_12	aTCTTttCtTgAAgATC AggaaacgacatctTTtctTgAaagatcaggaaCtt.gAagT	1231
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus	tgg c a a tt	
Seq_ID_17	CAACATCATATCAGGTACGTCAATGTTCATGCCCTCATGCAGCTGGTGTAGCAGCACTTCT	1650
Seq_ID_7	.....	869
Seq_ID_11	tAACATtATATCTGGcACaTCcATGTTCATGTCCaCacGCTGcCGGTGTAGCtGCACCTTgT	1424
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	CAAtATCATATCAGGcACaTCAATGTCTGCCCTCA.....	1193
Seq_ID_3	CAAtATCATATCAGGcACaTCAATGTCTGCCCTCA.....	1193
Seq_ID_10	CAACATCATtTCTGGaActTCcATGTTCATGtCncCATGtAagTGGgcTtGCAGCAnTaCT	1763
Seq_ID_5	CAAtATtATtTCTGGaActTCcATGTCTGCCCTCacGttGggGGatTgGCTGCTtTaCT	1649
Seq_ID_8	CAAtATtATtTCTGGaActTCcATGTCTGCCCTCacGttGggGGatTgGCTGCTtTaCT	1649
Seq_ID_16	CAACATtATATCTGGTACaTCcATGTCTTGtCCTCATGttagcGGgtTAGCtGCTtTaCT	1672
Seq_ID_13	CAACATAAttTCcGGTACcTCTATGTTCATGtCCTCAccttagcGGaGtTGCAGCAAtTgtT	428
Seq_ID_12	CtgaAgaAgcTatGcTtgaagAATaTgcgGagCaagTtgAagcacaATatagttttTgtT	1291
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus	caa at at tc gg ac tc atgtc tg cc ca t t t	



Figure 16AK

Seq_ID_17	GAAAGGAGCACACCCCAAATGGAGTCCTGCTGCCATCCGGTCGGCCATGATGACCACAGC	1710
Seq_ID_7	.....	869
Seq_ID_11	tAAAGGgaCcCACCCtgAATGGAGcCCaGCTGCCATtCGtTCGGCCATGATGACTACAGC	1484
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	.....	1193
Seq_ID_3	.....	1193
Seq_ID_10	GnAAGccGCcCAAtCCagAATGGAGTtnaGggGtnATaaGGTCaGCacTGATGACTACAGg	1823
Seq_ID_5	tAgAaGgGCcCACCCaAAgTGGAccCCaGCaGCggTaaaGTCaGCacTtATGACaACAGC	1709
Seq_ID_8	tAgAaGgGCcCACCCaAAgTGGAccCCaGCaGCggTaaaGTCaGCacTtATGACaACAGC	1709
Seq_ID_16	tAgAaaAGCttACCctAAATGGAccaCaGCaGCCATCaaaTCTGCCcTcATGACaACAGC	1732
Seq_ID_13	aAAaGcGCgCACCCtActTGGtccCTGCaGcTATtaaaTCaGCaATcATGACaACcGC	488
Seq_ID_12	ctgttagtagCAGtttAAAgatTTtTgtcatTtgtAcacGTgtatagTtcTaAtgtCtGt	1351
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus	a t t t a c g	
Seq_ID_17	CGACACGATGGATAACATGCAAATGCCCATCCGAGACATAGGTCGC...AACATAATGC	1767
Seq_ID_7	.....	869
Seq_ID_11	gGAtgttcTaGAcAACaCaAAAgTCCgATCCaAGACATcGGTCGtccagAgAATgcTGC	1544
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	.....	1193
Seq_ID_3	.....	1193
Seq_ID_10	ttACAgcAcacAcAaAgAatggnnaaatgATagagGAt...GTtGCcacAggAATgtcat	1879
Seq_ID_5	ttACAactTGGACAAttctggTAAagtAtTtacAGAtcTtGccactggccAagA.....	1763
Seq_ID_8	ttACAactTGGACAAttctggTAAagtAtTtacAGAtcTtGccactggccAagA.....	1763
Seq_ID_16	ttACAacgTtGATAACTccggcAaaaCCtTtacAGAtcTcGcgacaggccAggA.....	1786
Seq_ID_13	tGAtACagTcaAcctCgccaAcAatCCCATattAGAtgaAatgCtCcgtcctg.....	541
Seq_ID_12	ttttA...GGAgttgATaaAAATagtgTcatGcaAttTgctTaGgtatAtttATtgaca	1407
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus	a a	
Seq_ID_17	TGCCAGTCCCCTAGCCATGGGAGCTGGCCGTATCAATCCAAATAAGGCACTAGACCCTGG	1827
Seq_ID_7	.....	869
Seq_ID_11	TGCTAcTCCtCTtGCTATGGGAGCTGGCCaTATCAATCCtAAcAAGGCAaTAGAtCCTGG	1604
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	.....	1193
Seq_ID_3	.....	1193
Seq_ID_10	a..tAcaCCagTtGatcatGGcGCTGGaCaTgTgAATCCAgcagcaGCTaTgaAtCCTGG	1937
Seq_ID_5	atCtAcTCCCTtTcGttcatGGAtCaGGtCaTgTagAcCCgAAccgaGCAtTgGATCCgGG	1823
Seq_ID_8	atCtAcTCCCTtTcGttcatGGAtCaGGtCaTgTagAcCCgAAccgaGCAtTgGATCCgGG	1823
Seq_ID_16	atCgAGTCCgtTtGttcacGGgtCgGGtCaTgTggATCCgAAcAgaGCACTAGAtCCaGG	1846
Seq_ID_13	..CaAacatCtTtGCCATtGGtGCaGgaCaTgTCAATCCAtcacgaGCAaatGATCCaGG	599
Seq_ID_12	TtgtgaTCCttcgGttTttataaTGaaCaatgaAATtttgtggAaaaAaaAaaaaaa	1467
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus	g g c a a	



Figure 16AL

Seq_ID_17	ACTTATCTATGACATTACATCACAGGACTATATCAATCTCCTCTGTGCTCTAGATTTTAC	1887
Seq_ID_7	.....	869
Seq_ID_11	ACTcATCTATGAtAcaACaCACAaGAtTAcAtTAACTCTtCTtTGTGCTCTAAATcTcAC	1664
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	.....	1193
Seq_ID_3	.....	1193
Seq_ID_10	gtTagngTATGAtcTcACAgttgAtGACTATATaAActTCCTtTGcGCcCTgGATTacAg	1997
Seq_ID_5	ttTgATtTAcGACATcgaAaCtagcGAtTAcgTaAAATtTCCTaTGctCcaTgGcTTaTga	1883
Seq_ID_8	ttTgATtTAcGACATcgaAaCtagcGAtTAcgTaAAATtTCCTaTGctCcaTtGgcTaTga	1883
Seq_ID_16	tCTTgTCTAcGATATTgacaCgaAGGAtTAcgTggATtTttTaTGcGCcAtTgGTTaTga	1906
Seq_ID_13	ACTagTtTAcGATAcacaATtcaAGGAtTAcATatcTtattTaTGTGgTtTgdAaTAcAC	659
Seq_ID_12	AaaaAaaaAaaaAaA.....	1481
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus	a a	
Seq_ID_17	ATCTCAACAGATAAAAGCCATTACAAGGTCCTCTGCTTATTCTGTTCCTCAACTCATCATT	1947
Seq_ID_7	.....	869
Seq_ID_11	ATCcAgCAGATAAAAaCCATcAcTAgGTCCT...CTTATaCtTGccCCAACcCATCATT	1721
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	.....	1193
Seq_ID_3	.....	1193
Seq_ID_10	tCcaagtatGATcAAgGtCATcgCAAAgCgagaTatTTccTgCgnaaaCAAtaaggataT	2057
Seq_ID_5	cggcgAcgAtgTcgccGtgtTcgCgAGagatTCTtCTcgagtgaaTTgCAGtgaAcgAag	1943
Seq_ID_8	cggcgAcgAtgTcgccGtgtTcgCgAGagatTCTtCTcgagtgaaTTgCAGtgaAcgAag	1943
Seq_ID_16	tcCcaAAagaATttcAcCgtTcgtgAaagataCTtCTTcagtgaaTTgCAGCgaAaagaa	1966
Seq_ID_13	AgaTCgACAGATgggAagCcTTctAcaacgCa.....gaaCaaGTTgCtcgaaAgtgaa	713
Seq_ID_12	.....	1481
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus		
Seq_ID_17	GGATTTAAACTATCCATCATTCATAGGCTATTTCAATTATAACAGCAGCGAGTCAGACCC	2007
Seq_ID_7	.....	869
Seq_ID_11	GGAccTAAACTATCCATCtTTCATtGcCTATTTCAAcgtgAAtAGCAGCGAGTtgGAtCC	1781
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	.....	1193
Seq_ID_3	.....	1193
Seq_ID_10	aGAgTTg..CTgaCCtTaATTacccatCTtTTgCcATTcctttgGaAaCGgGcCtGgggC	2115
Seq_ID_5	tttggctActccgggAgaccTgAattaCccgTcgttcTccgttggttttaccggtGAgag	2003
Seq_ID_8	tttggctActccgggAgaccTgAattaCccgTcgttcTccgttggttttaccggtGAgag	2003
Seq_ID_16	tttagTtAgtccgggggatTTgAattatccaTcgttcTcagttgtatTTGgcagtG....	2022
Seq_ID_13	aagTaTtcctgAagCacaAcTCAattaCccTTcgTTTccAtttcacttGg.agca....	768
Seq_ID_12	.....	1481
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus		



Figure 16AM

Seq_ID_17	TAAAAGGATACAAGAATTCCAGAGGACGGTGACTAATGTAGGAGAAG...GTATGTCTGT	2064
Seq_ID_7	.....	869
Seq_ID_11	TAcAAGagTACAAGAATTCaAGAGGACaGTGACTAATGTcGGAGAAG...GTgTGTCgGa	1838
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	.....	1193
Seq_ID_3	.....	1193
Seq_ID_10	gAAcAtGcaAatAGtAgTgCAccaacaGtgacCagATaTAcGAGgAc...tctaacaaac	2172
Seq_ID_5	cAAcgGtgTgggttaAATaCaAGcGGgtGGTGAaTAATGTAGGAaAAaatacagatgCTGT	2063
Seq_ID_8	cAAcgGtgTgggttaAATaCaAGcGGgtGGTGAaTAATGTAGGAaAAaatacagatgCTGT	2063
Seq_ID_16	..AtAGtgTgggtgaAAaaCaAGcGtgtGGTtAaaAATGTtGGcaggaatacaAatgCgGT	2080
Seq_ID_13	....AatcaACAAacATaCacaAGaCaGTGACaAAcGTcGGgGAGG...caATGTCatc	821
Seq_ID_12	.....	1481
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus		
Seq_ID_17	ATATACAGCCAAATTGACCTCAATGGGTGATTATAAAGCTAGTGTTCACCTGACAAGTT	2124
Seq_ID_7	.....	869
Seq_ID_11	ATATACAGCCgAgcTGACTgCAATGccTGgactTAAAGtTAGTGTGttCCTGAaAAGTT	1898
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	.....	1193
Seq_ID_3	.....	1193
Seq_ID_10	gTgggaAatCcAgcTacataCAAgGccTcAgTcTcttctgAaatgcaggaagtgaAgaTT	2232
Seq_ID_5	gTATgaAGtgAAGgTGAatgCgccGtcgctcggtggAgGtgAaTGtATCACCGGcgAAGcT	2123
Seq_ID_8	gTATgaAGtgAAGgTGAatgCgccGtcgctcggtggAgGtgAaTGtATCACCGGcgAAGcT	2123
Seq_ID_16	gTATgagGtgAAaAaTaAatgCgccGGGTtccggtggAgGtgAagGTgaCtCCgactAAGcT	2140
Seq_ID_13	tTATcgcGtgAAgaTagttTCaccacaaaATgtTtccGtTgtTGTtaagCCTtcaActctT	881
Seq_ID_12	.....	1481
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus		
Seq_ID_17	GGTTTTCAAAGAGAAGTATGAAAAGCAAAGCTACAAGCTAAGGATAGAAGGTCCATTGCT	2184
Seq_ID_7	.....	869
Seq_ID_11	GGTTTTCAAAGAcAAGTATGAAAAGCAAAGCTACAAGCTgAGGATAGAAtGTCCAc aaCT	1958
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	.....	1193
Seq_ID_3	.....	1193
Seq_ID_10	caggTTgAAccAcAAacActtActttcAgTcGaaAg...AAGGAaAagAaaaCCTacaCT	2289
Seq_ID_5	tGTaTTCagTGAAGgAaaAgcAAAgtttgcTgTgAGaTtAGctTaaAgaGTaaAaaGag	2183
Seq_ID_8	tGTaTTCagTGAAGgAaaAgcAAAgtttgcTgTgAGaTtAGctTaaAgaGTaaAaaGag	2183
Seq_ID_16	tagTTTtAgcGAGAAaaATaAgAgtttgcTgTgAGaTtAGctTtagcaGTAatggaag	2200
Seq_ID_13	aaaaTTtAcgaAGttGaATcAgAAGttgAcaTACcgagTgAcatTttccacaaCAacaaa	941
Seq_ID_12	.....	1481
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus		



Figure 16AN

Seq_ID_17	AGTTGATATTATCTTG.TTTATGGTTCTTTGAGCTGGGTGGAAACTAGCGGTAAATATGT	2243
Seq_ID_7	.....	869
Seq_ID_11	gaTgaATgaTtTCTTGgTTcATGGTTCTTTaAGCTGGGTGGAAAaggGaGGTAAATATGT	2018
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	.....	1193
Seq_ID_3	.....	1193
Seq_ID_10	gtgacATtcacTgcTagTTccaaGccaTcaGgcacaaacTaGctttgctCGactggaATGg	2349
Seq_ID_5	tGgTGATtTgcagaTGg.TgAaGGGgaTTGaAtCTGcaT....ttggGtcGattgaATGg	2238
Seq_ID_8	tGgTGATtTgcagaTGg.TgAaGGGgaTTGaAtCTGcaT....ttggGtcGattgaATGg	2238
Seq_ID_16	tGTTGggtTggagagag.TaAaaGgTCTTgaAtCaGcaT....ttggGtcaattgagTGg	2255
Seq_ID_13	ca.....TcAcaaacaTggaAGtTGttc....AtggatacTtgAaATGg	981
Seq_ID_12	.....	1481
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus		
Seq_ID_17	TGTAAAAAGTCCCATTGTGCGAACTA.CCATAAGAGTGGATCCTCTGTGAGGACAGAACT	2302
Seq_ID_7	.....	869
Seq_ID_11	aGTTAggAGcCCaATTGTtGCCaCaAattcTtAagtTtGATCCTtTGacAGGAtAGtACT	2078
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	.....C.....	1194
Seq_ID_3	.....C.....	1194
Seq_ID_10	TcagAtggacaaCATgtTgttgctagcCCAattGct TtcAgttggacatgattatGctaa	2409
Seq_ID_5	aGTgAtggaattCAcaaTgtgAgaagcCCAattGcGgtGcgttggcGTcActAttctgaT	2298
Seq_ID_8	aGTgAtggaattCAcaaTgtgAgaagcCCAattGcGgtGcgttggcGTcActAttctgaT	2298
Seq_ID_16	aGTgAtggaattCAcAGcgtgAggagatCCAattGcGgtGcattggctactccACTctgCT	2315
Seq_ID_13	acaAgtgAtaagCATTtTgtaAgaagtCCAattGctgttATtCTacaaGAGcAtgaAACa	1041
Seq_ID_12	.....	1481
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus	C	
Seq_ID_17	GATTATGAGTCCTGTATTCTGAAAATGTGATACAGTGATGAATAATTGTGAAGTTAAATT	2362
Seq_ID_7	.....	869
Seq_ID_11	GATTActga....aTATTCcactAAacatgTctttTGAgAcatgaTaTatAcaTActTg	2134
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	.....	1194
Seq_ID_3	.....	1194
Seq_ID_10	ttcTATaAGTCaTtcAcTgcaAAtgTacaAgtgcaaatattcctATAaaatAaTTActag	2469
Seq_ID_5	GcagcatccatgTGagTaaTGgAtgatTGtTctttatATtgcattgcaTGgAccaAtAaa	2358
Seq_ID_8	GcagcatccatgTGagTaaTGg AtgatTGtTctttatATtgcattgcaTGgAccaAtAaa	2358
Seq_ID_16	acagAatctcagTGagcaaTGgActatgaAgcaAGAagatA.attgTGctAAtcTgcAaa	2374
Seq_ID_13	ccagAaGAtTagTG..TctTtActtTtTaATAattTGtTcAATttaTaataAAccc.cgTa	1098
Seq_ID_12	.....	1481
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus		



Figure 16AO

Seq_ID_17	CAAAAAAAAAATCTTTTCAGTTAGTTAAAACTAAGTTGCTGATTAAAAAAAAAAAAAAAAAAAA	2422
Seq_ID_7	.....	869
Seq_ID_11	tgAAgtgtAgTtcTaTggtTcAcantnnAaaAAAAAAAAAaAAAAAAAAAAAAA.....	2188
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	.....	1194
Seq_ID_3	.....	1194
Seq_ID_10	tgtgcAgcAgctacTcCtcTaAtaTtccACcAACTaaaaAaTAGccctgAcctAtAAtt	2529
Seq_ID_5	CtgggAtgA.TgacaaattgaAagacgAAaTggtgctagaggatcAtcgAAtttgtccAA	2417
Seq_ID_8	CtgggAtgA.TgacaaattgaAagacgAAaTggtgctagaggatcAtcgAAtttgtccAA	2417
Seq_ID_16	CtggttAtgggcCagaaacaggAacaAggctaAgtTcagaaAggAAAaggAAAtAgggAAg	2434
Seq_ID_13	ttA..AttgATtgTaTCcaaaAtgTAGAAtgAgtgcaaaaATTgctcAtgttttAttctA	1156
Seq_ID_12	.....	1481
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus		
Seq_ID_17	AAA.....	2425
Seq_ID_7	.....	869
Seq_ID_11	.....	2188
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	.....	1194
Seq_ID_3	.....	1194
Seq_ID_10	AAgatgcctaggaaattcttagcatctagacaaggaaaatggttggtgatttgtccagcaa	2589
Seq_ID_5	ctt.taatttcactttctttaccttttgttctctgatgttggttcagattgatgtatatat	2476
Seq_ID_8	ctt.taatttcactttctttaccttttgttctctgatgttggttcagattgatgtatatat	2476
Seq_ID_16	g....aacatctatctgttgaaataatgttaagaaattttcatcattcttttct...tgt	2487
Seq_ID_13	ctggtgatattttcccttgtggttaaaaaaaaaaaaaa.....	1193
Seq_ID_12	.....	1481
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus		



Figure 16AP

Seq_ID_17	.....A.....	2426
Seq_ID_7	.....	869
Seq_ID_11	.....	2188
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	.....	1194
Seq_ID_3	.....	1194
Seq_ID_10	aagacAggtgttttacttgccagattattatgtaccaagccacacaatatggataaatac	2649
Seq_ID_5	gaatgAagcatatcccgattgtttccagaaaaaaaaaaaaaaaaaaaaaaaaaaaaa...	2533
Seq_ID_8	gaatgAagcatatcccgattgtttccacag aaaaaaaaaaaaaaaaaaaaaaaaaaaaa...	2532
Seq_ID_16	ttatgAgtattttatcag.....ccacaaaaaaaaaaaaaaaaaaaaaaaaaaaaa...	2538
Seq_ID_13	.....	1193
Seq_ID_12	.....	1481
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus		
Seq_ID_17	.....	2426
Seq_ID_7	.....	869
Seq_ID_11	.....	2188
Seq_ID_14	.....	748
Seq_ID_15	.....	748
Seq_ID_4	.....	1194
Seq_ID_3	.....	1194
Seq_ID_10	aattggcttttcg aaaaaaaaaaaaaaaaaaaaaaaaaaaaa	2691
Seq_ID_5	.....	2533
Seq_ID_8	.....	2532
Seq_ID_16	.....	2538
Seq_ID_13	.....	1193
Seq_ID_12	.....	1481
Seq_ID_9	.....	716
Seq_ID_6	.....	813
Consensus		



Figure 16B

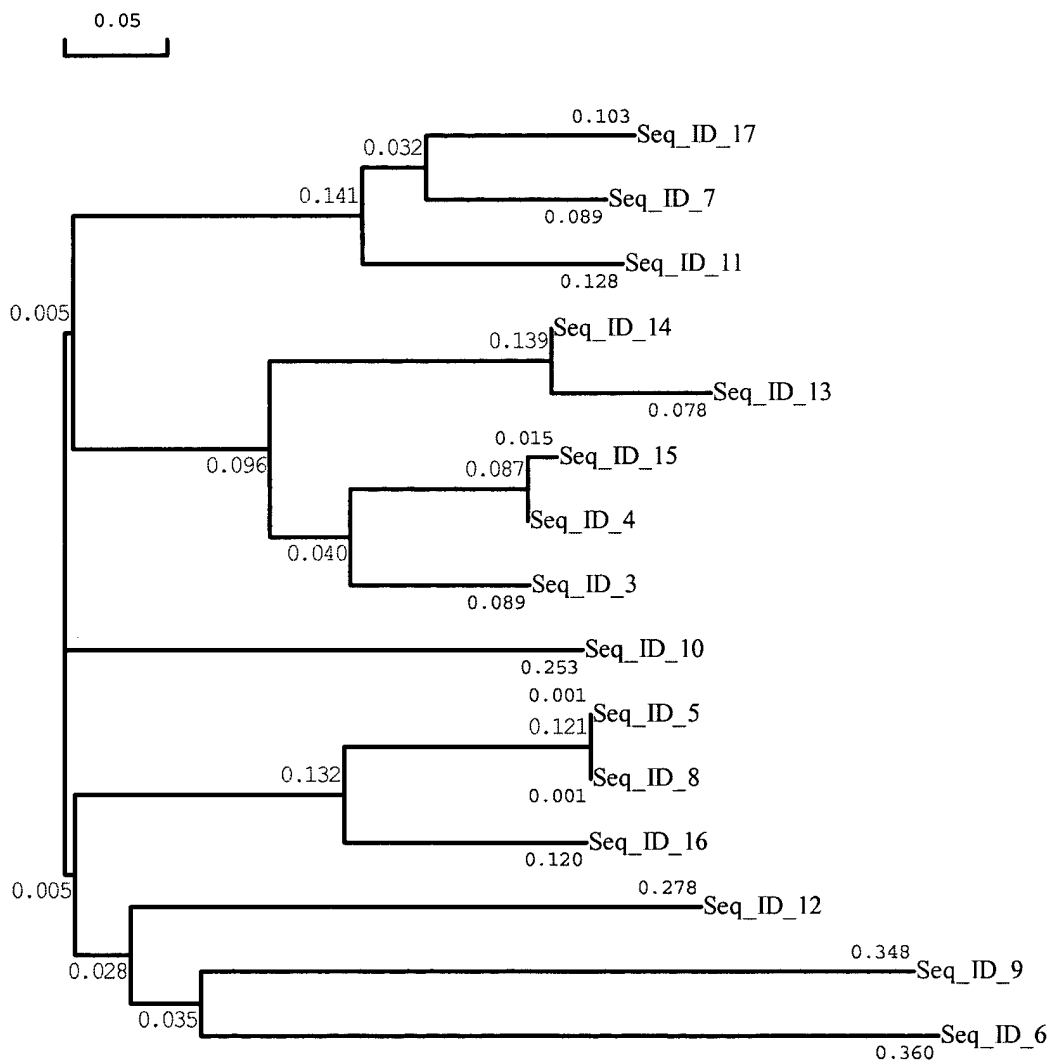
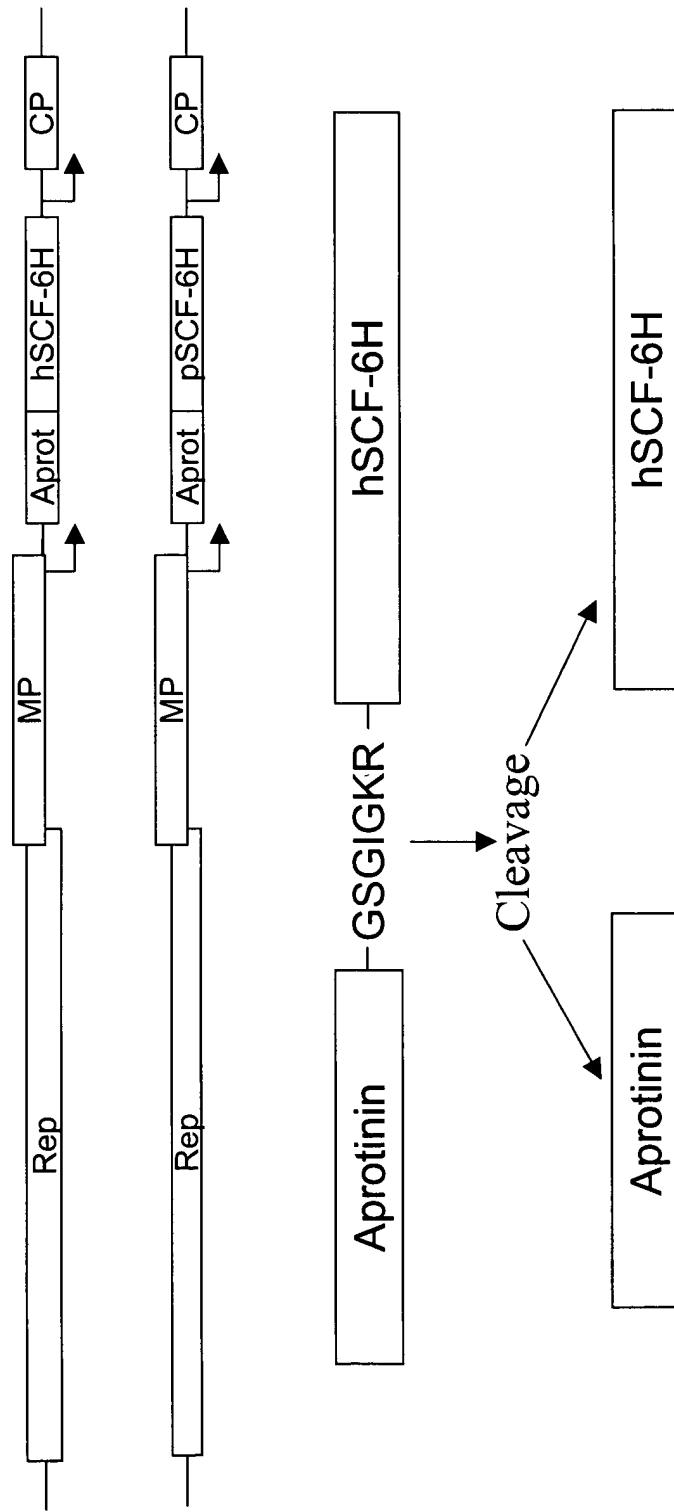




FIGURE 17

Protease Inhibitor-SCF Fusions
GENEWARE® Vector Design



Protease Inhibitor-SCF Fusions
Coomassie Stained Gel

FIGURE 18

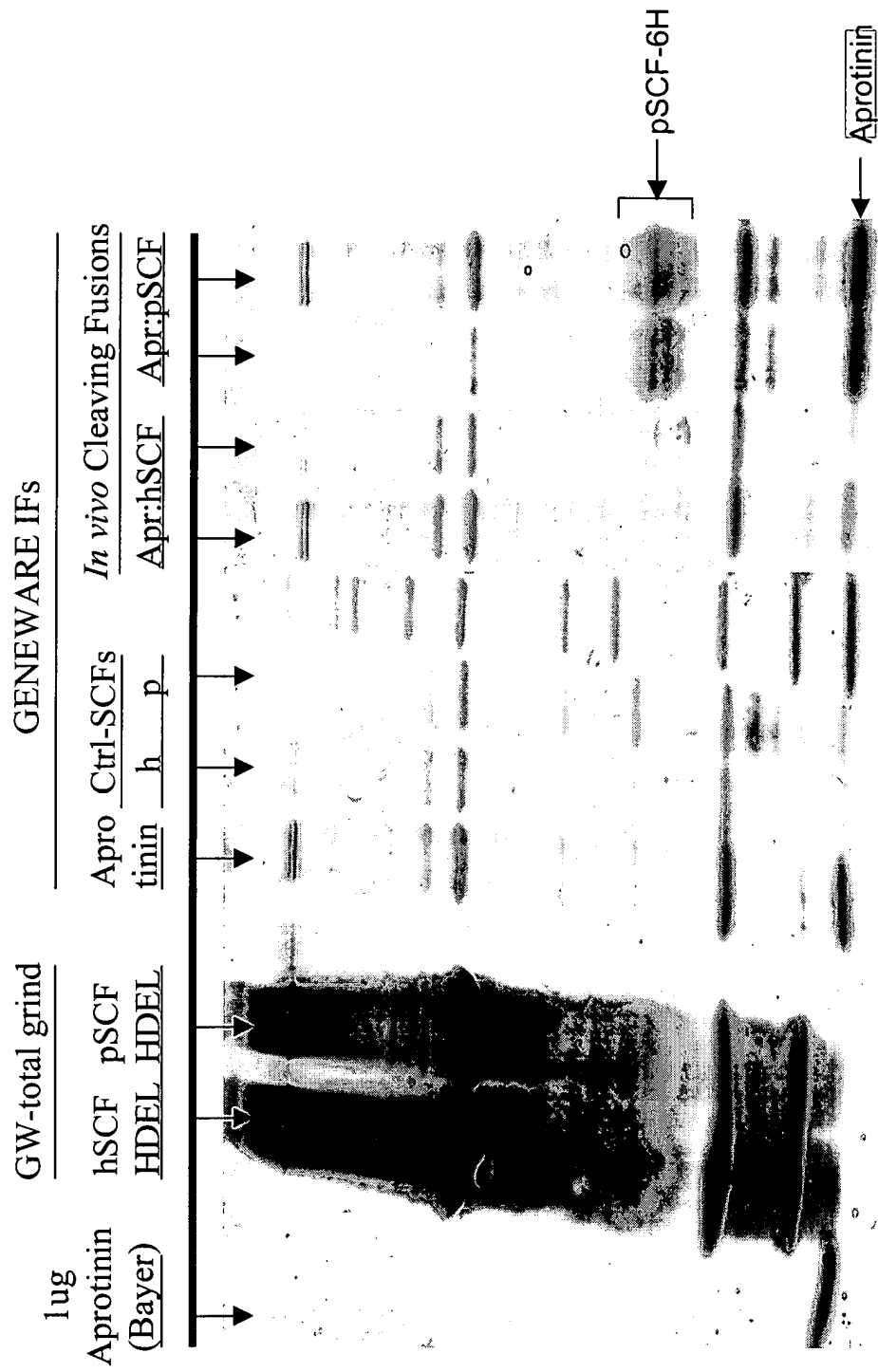
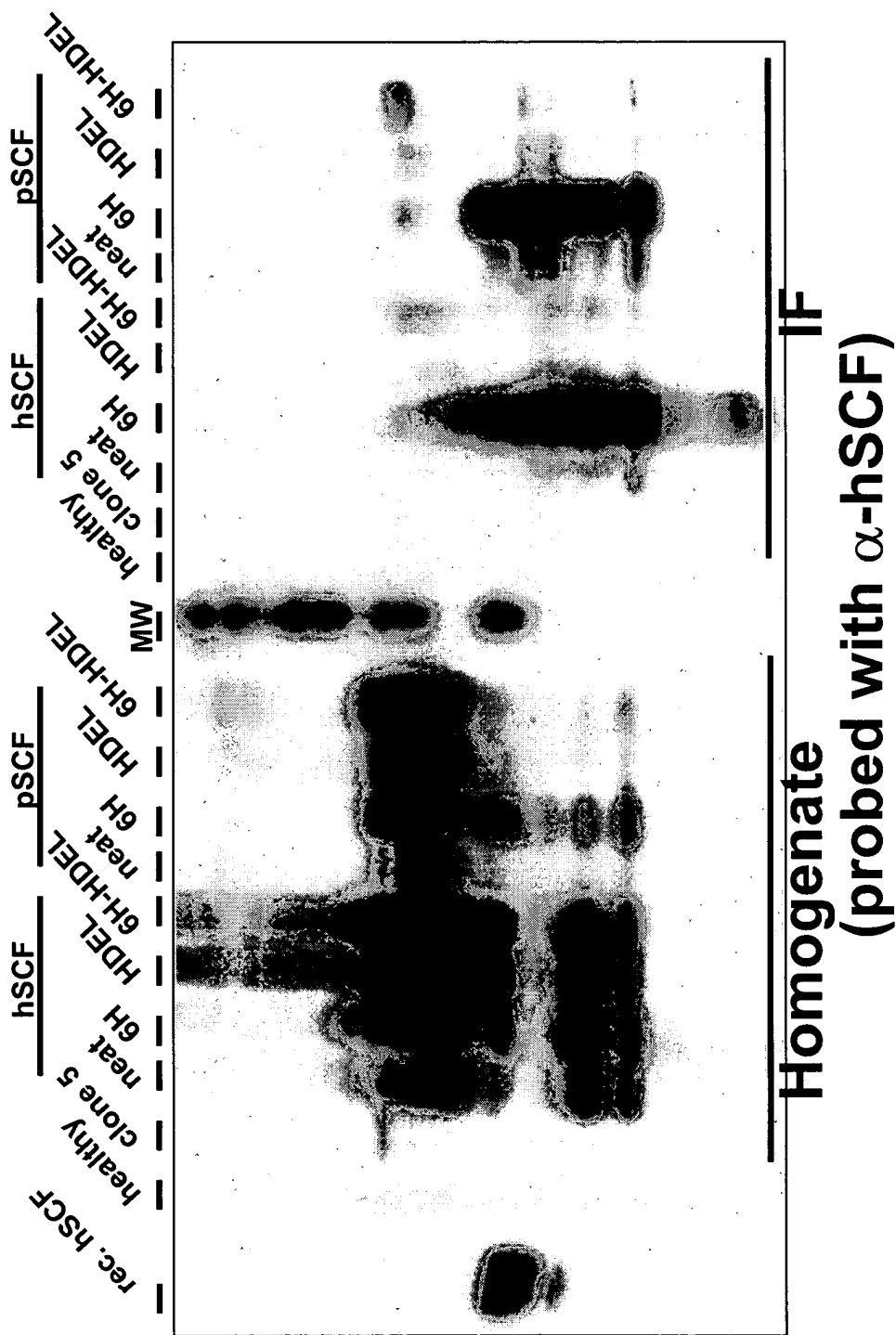


FIGURE 19
Western Blot Analysis of hSCF and pSCF
Extracted from Infected Plants



Protease Inhibitor-SCF Fusions
Anti-hSCF Western Blot

FIGURE 20

